

CooliRIGBT™

Features

- Designed And Qualified for Automotive Applications
- Ultra Fast Switching IGBT:70-200kHz
- Extremely Low Switching Losses
- Maximum Junction Temperature 175 °C
- Square RBSOA
- Positive $V_{CE(on)}$ Temperature Coefficient

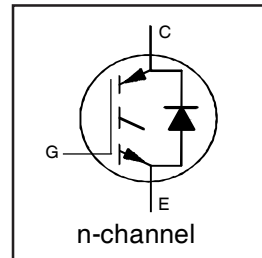
Benefits

- Optimized High Frequency Switching Applications
- Rugged Transient Performance for Increased Reliability
- Excellent Current Sharing in Parallel Operation

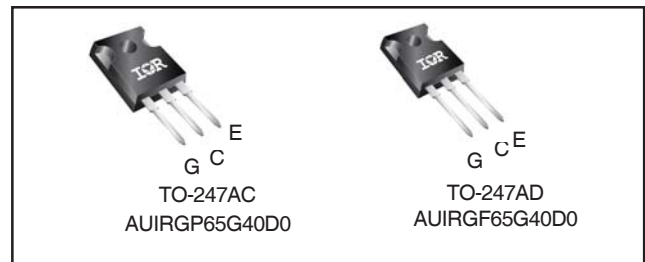
Applications

- DC-DC Converter
- PFC

ULTRAFAST IGBT WITH ULTRAFAST SOFT RECOVERY DIODE



$V_{CES} = 600V$
$V_{CE(on)} \text{ typ.} = 1.8V$
$I_C @ T_C = 100^\circ C = 41A$
$T_J \text{ max} = 175^\circ C$



G	C	E
Gate	Collector	Emitter

Base part number	Package Type	Standard Pack		Orderable Part Number
		Form	Quantity	
AUIRGP65G40D0	TO-247AC	Tube	25	AUIRGP65G40D0
AUIRGF65G40D0	TO-247AD	Tube	25	AUIRGF65G40D0

Absolute Maximum Ratings

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only; and functional operation of the device at these or any other condition beyond those indicated in the specifications is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability. The thermal resistance and power dissipation ratings are measured under board mounted and still air conditions. Ambient temperature (T_A) is 25°C, unless otherwise specified.

	Parameter	Max.	Units
V_{CES}	Collector-to-Emitter Voltage	600	V
$I_C @ T_C = 25^\circ C$	Continuous Collector Current ⑥	62	A
$I_C @ T_C = 100^\circ C$	Continuous Collector Current ⑥	41	
$I_{NOMINAL}$	Nominal Current @ 200kHz ⑦	20	
I_{CM}	Pulse Collector Current	84	
I_{LM}	Clamped Inductive Load Current ①	112	
$I_F @ T_C = 25^\circ C$	Diode Continuous Forward Current	46.1	
$I_F @ T_C = 100^\circ C$	Diode Continuous Forward Current	30	
I_{FRM}	Maximum Repetitive Forward Current ②	112	V
V_{GE}	Gate-to-Emitter Voltage	±20	
$P_D @ T_C = 25^\circ C$	Maximum Power Dissipation	625	W
$P_D @ T_C = 100^\circ C$	Maximum Power Dissipation	313	
T_J T_{STG}	Operating Junction and Storage Temperature Range	-55 to +175	°C
	Soldering Temperature for 10 sec.	300 (0.063 in. (1.6mm) from case)	
	Mounting Torque, 6-32 or M3 Screw	10 lbf·in (1.1 N·m)	

Thermal Resistance

	Parameter	Min.	Typ.	Max.	Units
$R_{\theta JC}$ (IGBT)	Junction-to-Case-(each IGBT) ④	—	—	0.24	°C/W
$R_{\theta JC}$ (Diode)	Junction-to-Case-(each Diode) ④	—	—	1.78	
$R_{\theta CS}$	Case-to-Sink (flat, greased surface)	—	0.24	—	
$R_{\theta JA}$	Junction-to-Ambient (typical socket mount)	—	—	40	
		—	6.0 (0.21)	—	g (oz)

*Qualification standards can be found at <http://www.irf.com/>

Electrical Characteristics @ T_J = 25°C (unless otherwise specified)

	Parameter	Min.	Typ.	Max.	Units	Conditions
V _{(BR)CES}	Collector-to-Emitter Breakdown Voltage	600	—	—	V	V _{GE} = 0V, I _C = 500μA ③
ΔV _{(BR)CES} /ΔT _J	Temperature Coeff. of Breakdown Voltage	—	0.18	—	V/°C	V _{GE} = 0V, I _C = 1.0mA (25°C-175°C)
V _{CE(on)}	Collector-to-Emitter Saturation Voltage	—	1.4	—	V	I _C = 12A, V _{GE} = 15V, T _J = 25°C
		—	1.8	2.2		I _C = 20A, V _{GE} = 15V, T _J = 25°C
		—	1.9	—		I _C = 12A, V _{GE} = 15V, T _J = 150°C
		—	2.6	—		I _C = 20A, V _{GE} = 15V, T _J = 150°C
		—	2.2	—		I _C = 12A, V _{GE} = 15V, T _J = 175°C
		—	3.0	—		I _C = 20A, V _{GE} = 15V, T _J = 175°C
V _{GE(th)}	Gate Threshold Voltage	3.0	—	5.5	V	V _{CE} = V _{GE} , I _C = 250μA
ΔV _{GE(th)} /ΔT _J	Threshold Voltage temp. coefficient	—	-12	—	mV/°C	V _{CE} = V _{GE} , I _C = 1.0mA (25°C - 175°C)
g _{fe}	Forward Transconductance	—	36	—	S	V _{CE} = 50V, I _C = 20A
I _{CES}	Collector-to-Emitter Leakage Current	—	3.2	25	μA	V _{GE} = 0V, V _{CE} = 600V
		—	0.81	—	mA	V _{GE} = 0V, V _{CE} = 600V, T _J = 175°C
V _{FM}	Diode Forward Voltage Drop	—	1.7	2.45	V	I _F = 20A
		—	1.4	—		I _F = 20A, T _J = 175°C
I _{GES}	Gate-to-Emitter Leakage Current	—	—	±100	nA	V _{GE} = ±20V

Switching Characteristics @ T_J = 25°C (unless otherwise specified)

	Parameter	Min.	Typ.	Max.	Units	Conditions
Q _g	Total Gate Charge (turn-on)	—	180	270	nC	I _C = 20A
Q _{ge}	Gate-to-Emitter Charge (turn-on)	—	28	42		V _{GE} = 15V
Q _{gc}	Gate-to-Collector Charge (turn-on)	—	64	96		V _{CC} = 400V
E _{on}	Turn-On Switching Loss	—	298	389	μJ	I _C = 20A, V _{CC} = 400V, V _{GE} = 15V
E _{off}	Turn-Off Switching Loss	—	147	234		R _G = 4.7Ω, L = 485μH, T _J = 25°C
E _{total}	Total Switching Loss	—	445	623		Energy losses include tail & diode reverse recovery
t _{d(on)}	Turn-On delay time	—	35	53	ns	I _C = 20A, V _{CC} = 400V, V _{GE} = 15V
t _r	Rise time	—	12	29		R _G = 4.7Ω, L = 485μH, T _J = 25°C
t _{d(off)}	Turn-Off delay time	—	142	163		
t _f	Fall time	—	15	32		
E _{on}	Turn-On Switching Loss	—	630	—		μJ
E _{off}	Turn-Off Switching Loss	—	137	—	R _G = 4.7Ω, L = 485μH, T _J = 175°C	
E _{total}	Total Switching Loss	—	767	—	Energy losses include tail & diode reverse recovery	
t _{d(on)}	Turn-On delay time	—	33	—	ns	I _C = 20A, V _{CC} = 400V, V _{GE} = 15V
t _r	Rise time	—	12	—		R _G = 4.7Ω, L = 485μH
t _{d(off)}	Turn-Off delay time	—	165	—		T _J = 175°C
t _f	Fall time	—	16	—		
C _{ies}	Input Capacitance	—	4673	—	pF	V _{GE} = 0V
C _{oes}	Output Capacitance	—	337	—		V _{CC} = 30V
C _{res}	Reverse Transfer Capacitance	—	58	—		f = 1.0Mhz
C _{oes eff.}	Effective Output Capacitance (Time Related) ⑤	—	406	—		V _{GE} = 0V, V _{CE} = 0V to 480V
C _{oes eff. (ER)}	Effective Output Capacitance (Energy Related) ⑥	—	162	—		
RBSOA	Reverse Bias Safe Operating Area	FULL SQUARE				
t _{rr}	Diode Reverse Recovery Time	—	41	—	ns	T _J = 25°C I _F = 20A, V _R = 200V,
		—	70	—		T _J = 125°C di/dt = 200A/μs
Q _{rr}	Diode Reverse Recovery Charge	—	116	—	nC	T _J = 25°C I _F = 20A, V _R = 200V,
		—	580	—		T _J = 125°C di/dt = 200A/μs
I _{rr}	Peak Reverse Recovery Current	—	4.8	—	A	T _J = 25°C I _F = 20A, V _R = 200V,
		—	7.2	—		T _J = 125°C di/dt = 200A/μs

Notes ① through ⑦ are on page 13

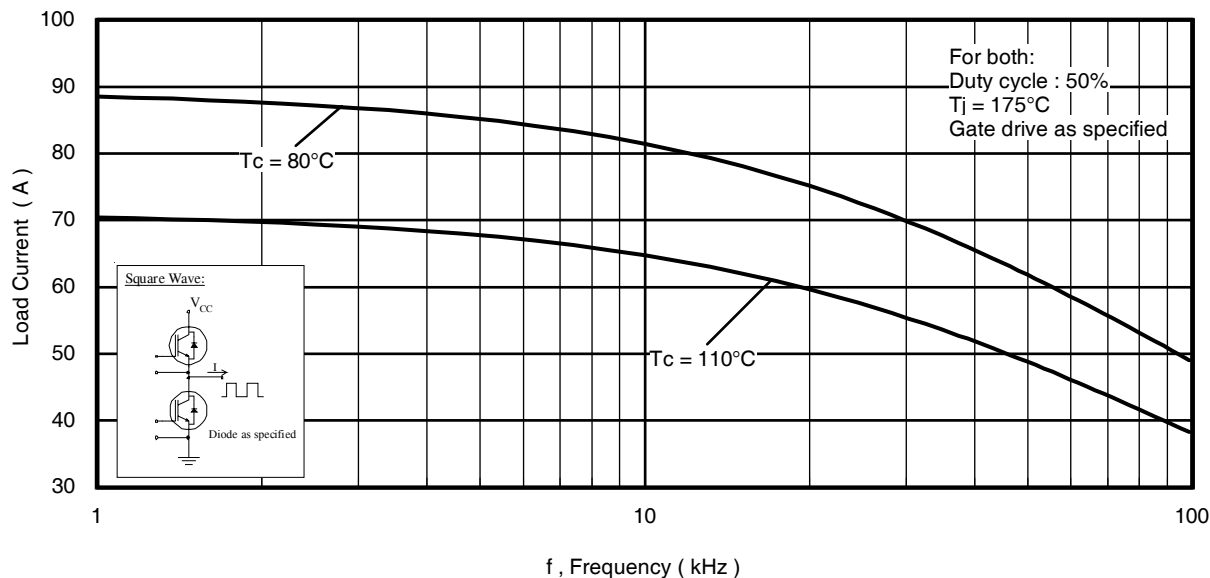


Fig. 1 - Typical Load Current vs. Frequency
(Load Current = IRMS of fundamental)

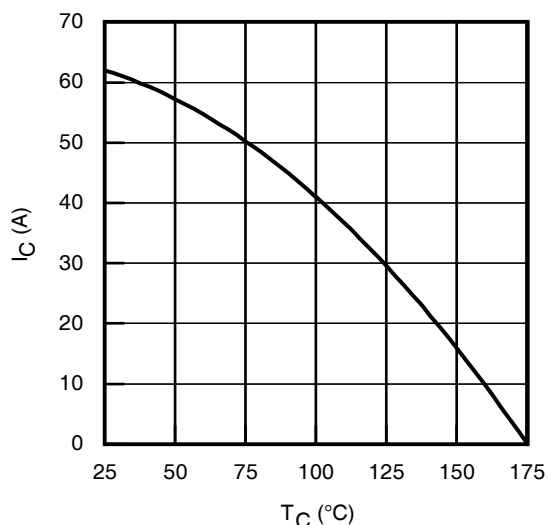


Fig. 2 - Maximum DC Collector Current vs. Case Temperature

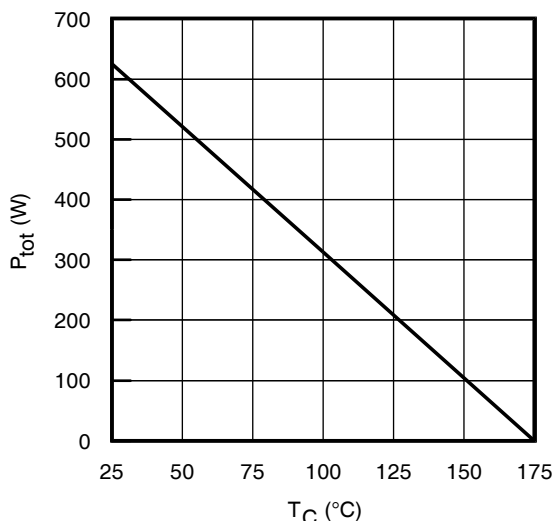


Fig. 3 - Power Dissipation vs. Case Temperature

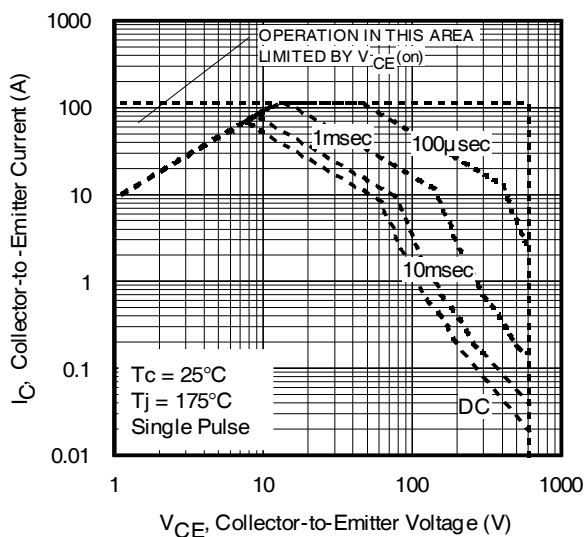


Fig. 4 - Forward SOA
 $T_C = 25^\circ\text{C}; T_J \leq 175^\circ\text{C}; V_{GE} = 15\text{V}$

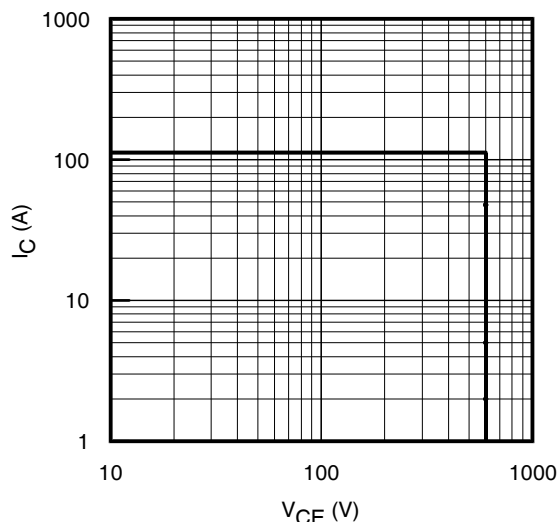


Fig. 5 - Reverse Bias SOA
 $T_J = 175^\circ\text{C}; V_{GE} = 20\text{V}$

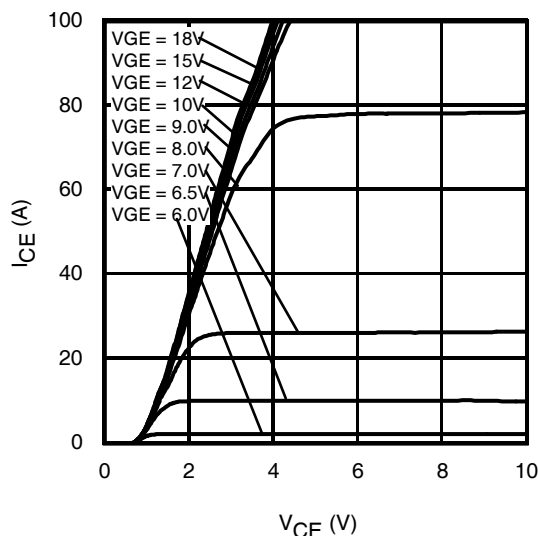


Fig. 6 - Typ. IGBT Output Characteristics
 $T_J = -40^\circ\text{C}$; $t_p = 30\mu\text{s}$

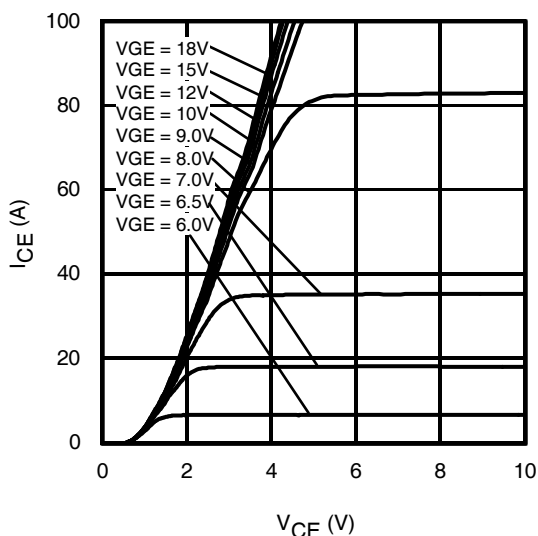


Fig. 7 - Typ. IGBT Output Characteristics
 $T_J = 25^\circ\text{C}$; $t_p = 30\mu\text{s}$

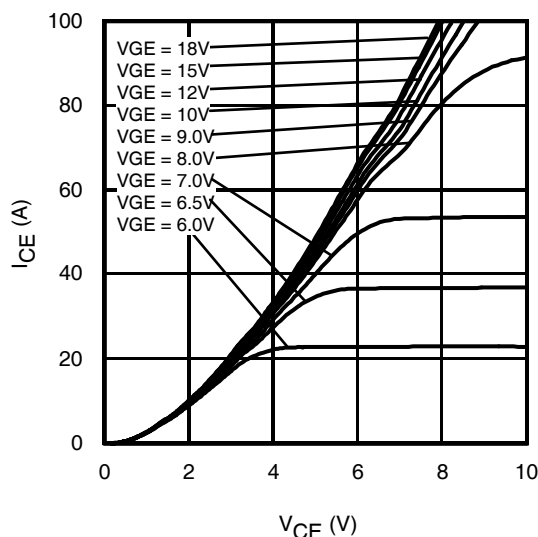


Fig. 8 - Typ. IGBT Output Characteristics
 $T_J = 175^\circ\text{C}$; $t_p = 30\mu\text{s}$

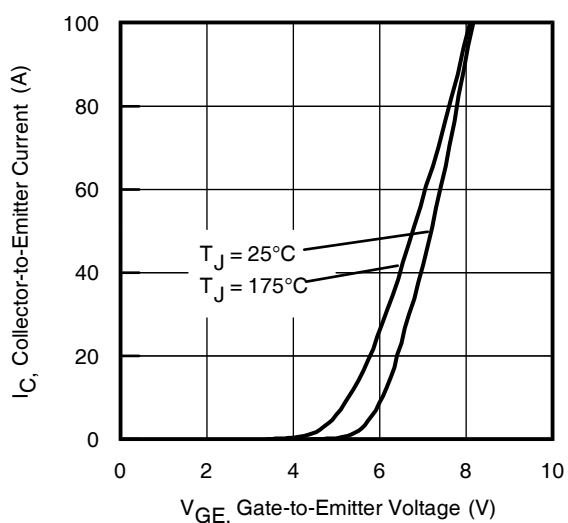


Fig. 9 - Typ. Transfer Characteristics
 $V_{CE} = 50\text{V}$; $t_p = 30\mu\text{s}$

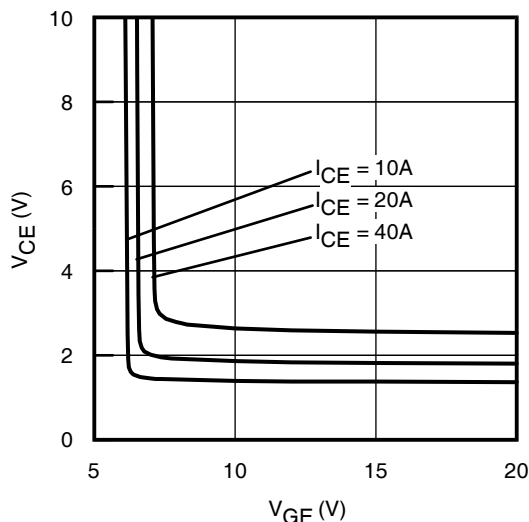


Fig. 10 - Typical V_{CE} vs. V_{GE}
 $T_J = 25^\circ\text{C}$

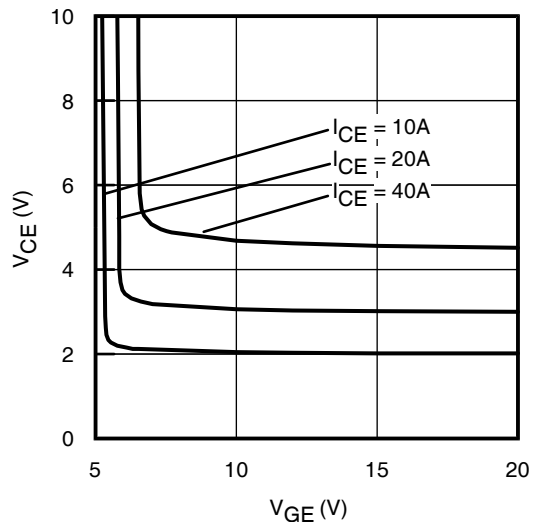


Fig. 11 - Typical V_{CE} vs. V_{GE}
 $T_J = 175^\circ\text{C}$

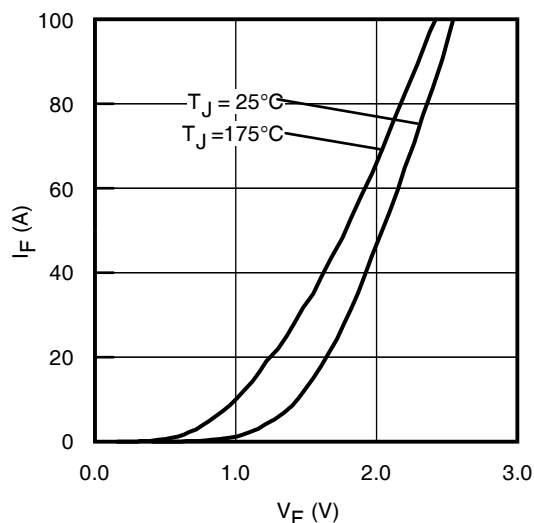


Fig. 12 - Typ. Diode Forward Characteristics
 $t_p = 30\mu s$

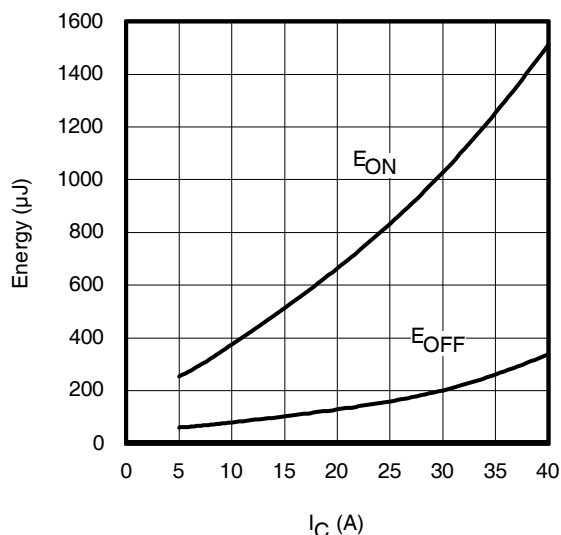


Fig. 13 - Typ. Energy Loss vs. I_C
 $T_J = 175^\circ C$; $L = 0.49mH$; $V_{CE} = 400V$; $R_G = 4.7\Omega$; $V_{GE} = 15V$

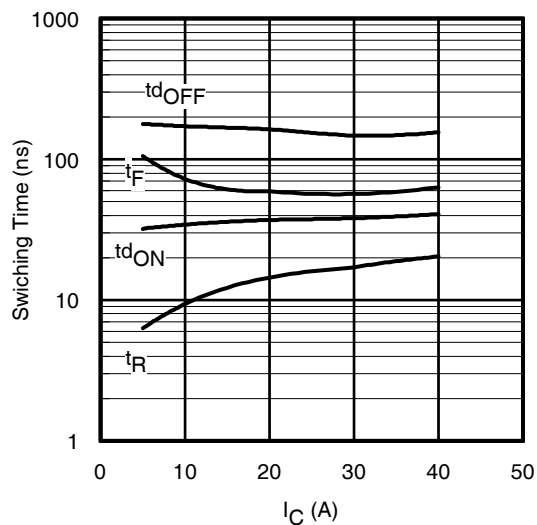


Fig. 14 - Typ. Switching Time vs. I_C
 $T_J = 175^\circ C$; $L = 0.49mH$; $V_{CE} = 400V$; $R_G = 4.7\Omega$; $V_{GE} = 15V$

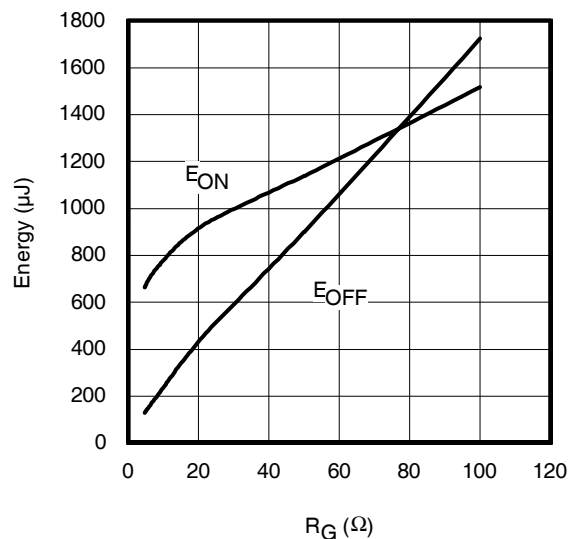


Fig. 15 - Typ. Energy Loss vs. R_G
 $T_J = 175^\circ C$; $L = 0.49mH$; $V_{CE} = 400V$; $I_{CE} = 20A$; $V_{GE} = 15V$

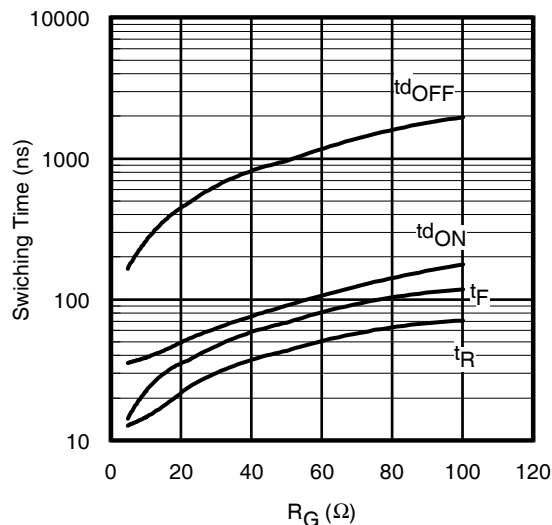


Fig. 16 - Typ. Switching Time vs. R_G
 $T_J = 175^\circ C$; $L = 0.49mH$; $V_{CE} = 400V$; $I_{CE} = 20A$; $V_{GE} = 15V$

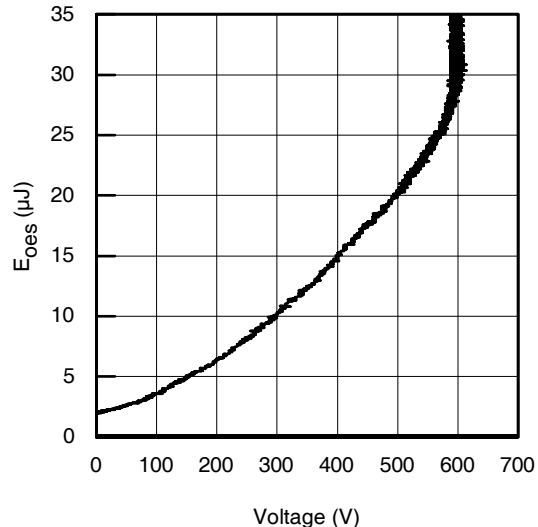


Fig. 17 - Typ. Output Capacitance
 Stored Energy vs. V_{CE}

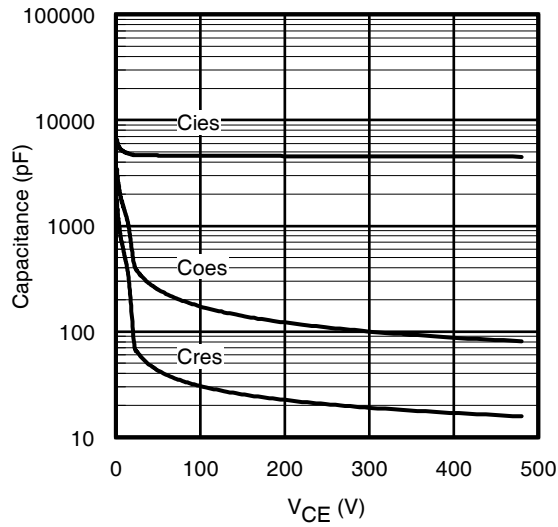


Fig. 18 - Typ. Capacitance vs. V_{CE}
 $V_{GE} = 0V$; $f = 1MHz$

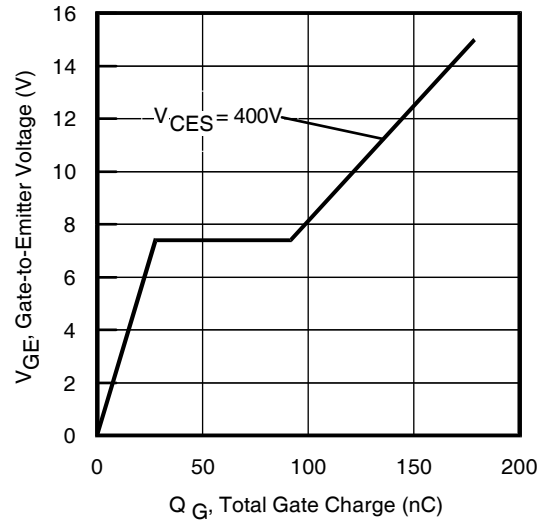


Fig. 19 - Typical Gate Charge vs. V_{GE}
 $I_{CE} = 20A$; $L = 200\mu H$

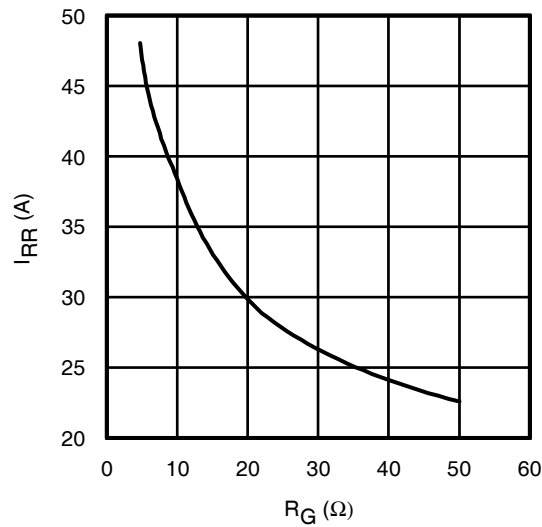
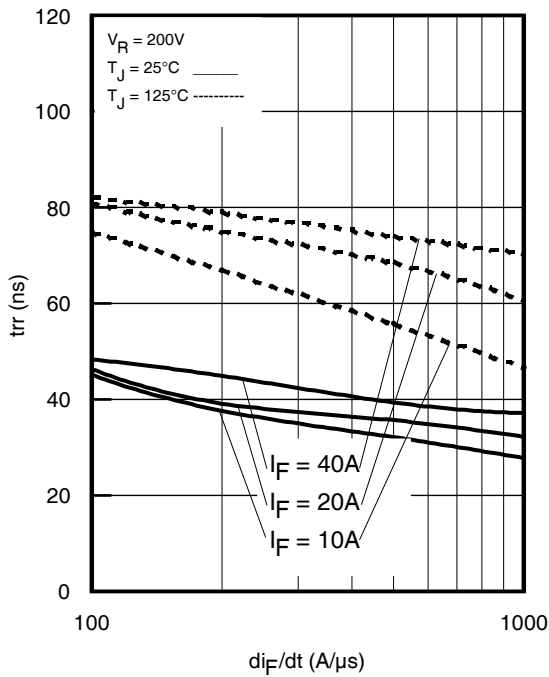
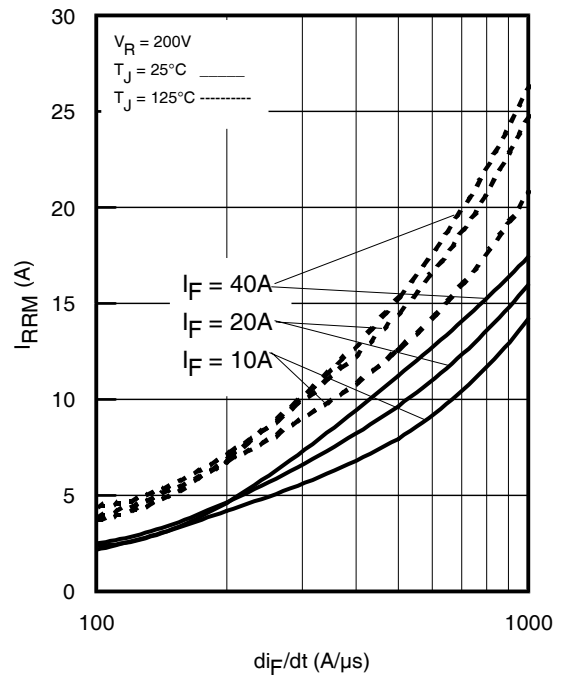
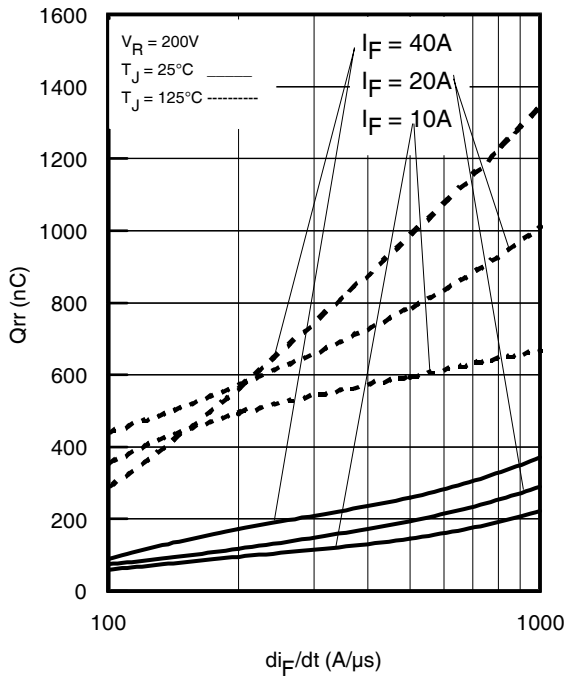
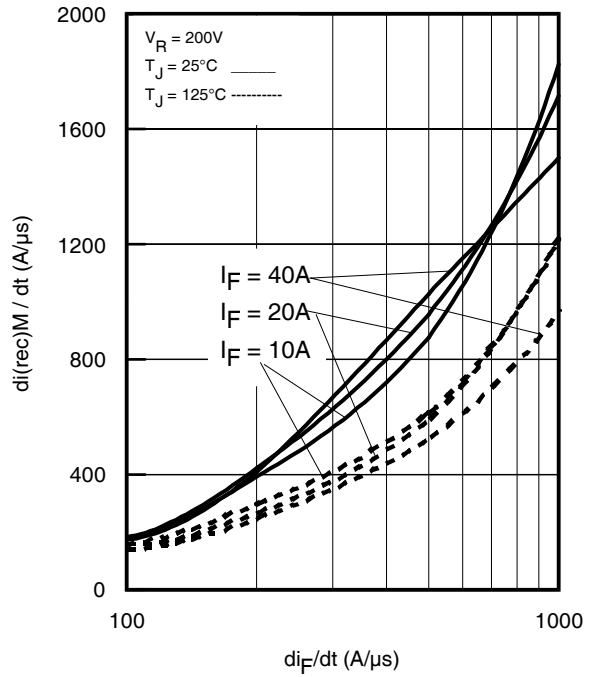
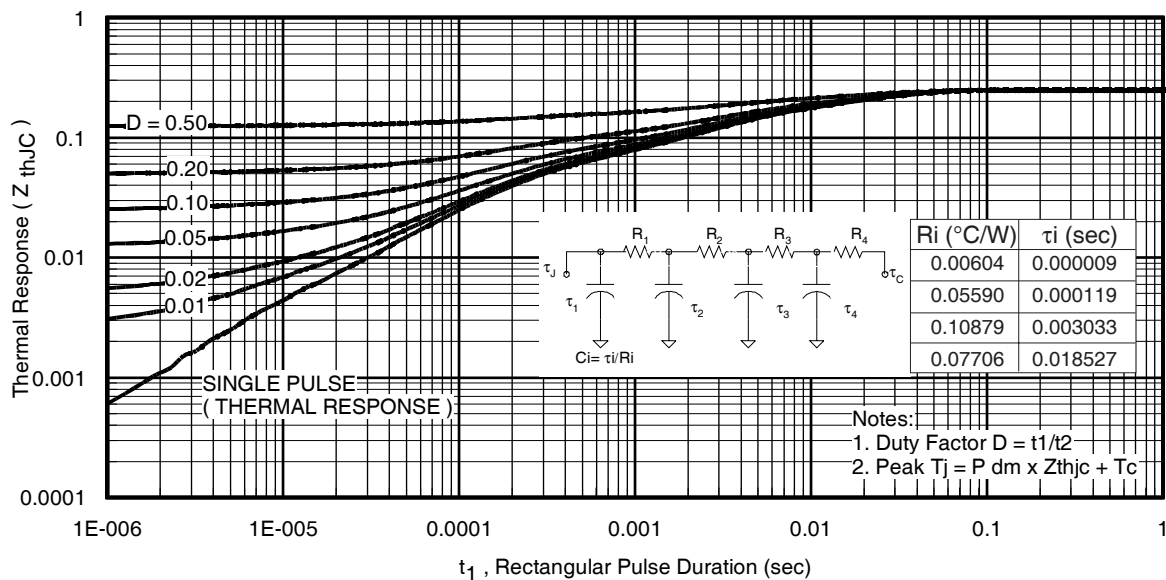
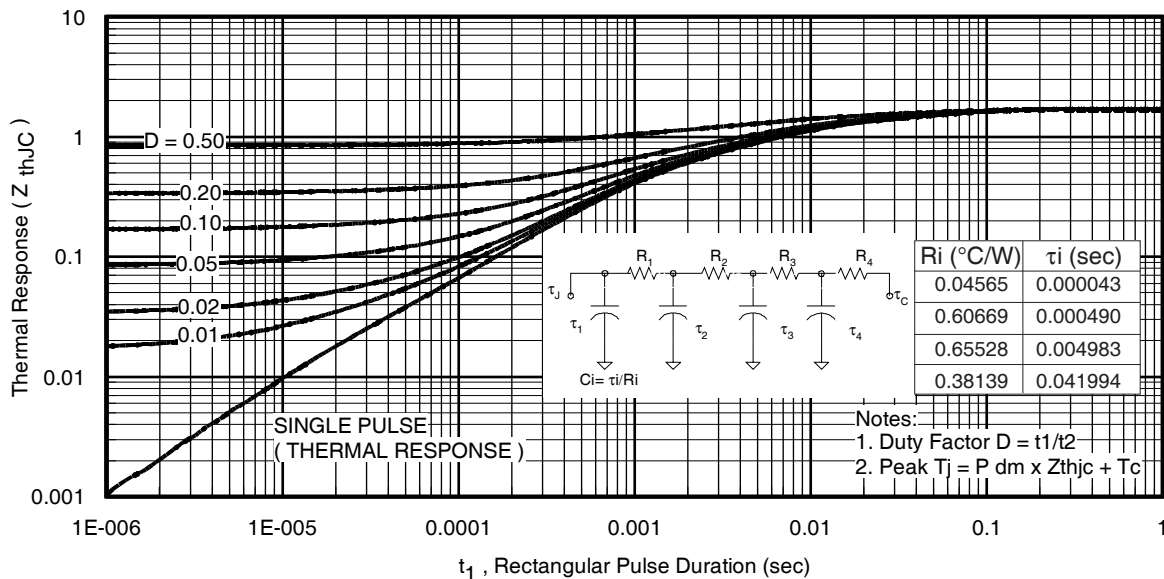
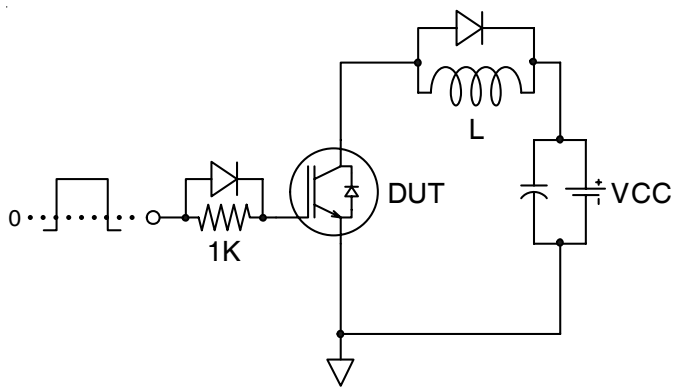
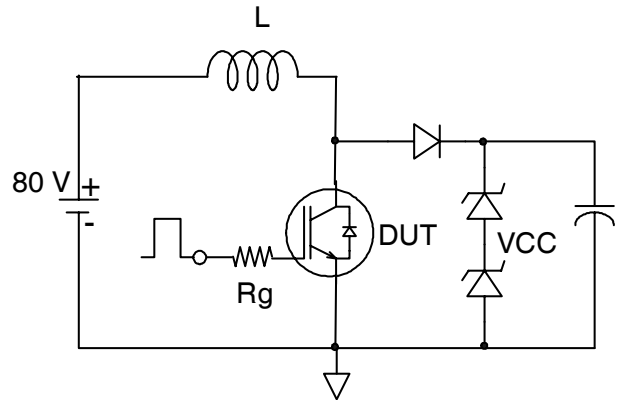
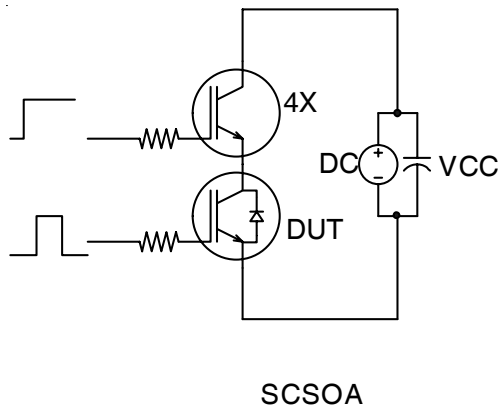
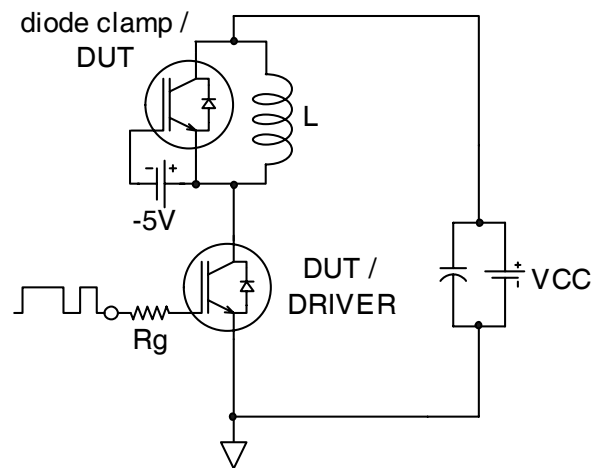
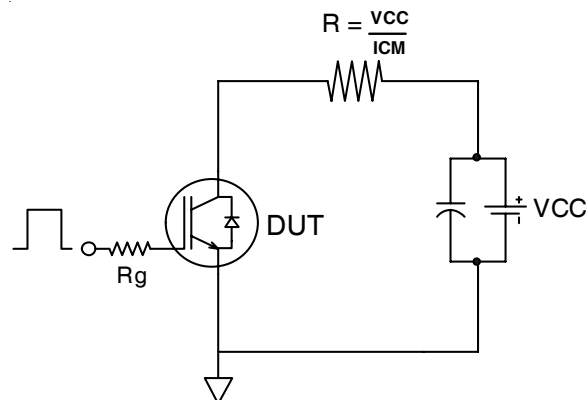


Fig. 20 - Typ. Diode I_{RR} vs. R_G
 $T_J = 175^\circ C$


Fig. 21 - Typical Reverse Recovery vs. di_F/dt

Fig. 22 - Typical Recovery Current vs. di_F/dt

Fig. 23 - Typical Stored Charge vs. di_F/dt

Fig. 24 - Typical $di_{(rec)M}/dt$ vs. di_F/dt ,


Fig 25. Maximum Transient Thermal Impedance, Junction-to-Case (IGBT)

Fig. 26. Maximum Transient Thermal Impedance, Junction-to-Case (DIODE)


Fig.C.T.1 - Gate Charge Circuit (turn-off)

Fig.C.T.2 - RBSOA Circuit

Fig.C.T.3 - S.C. SOA Circuit

Fig.C.T.4 - Switching Loss Circuit

Fig.C.T.5 - Resistive Load Circuit

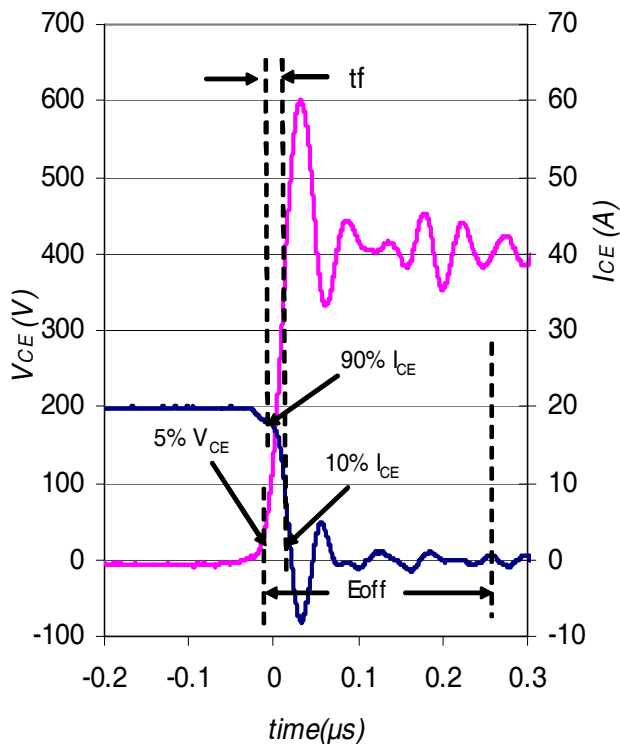


Fig. WF1 - Typ. Turn-off Loss Waveform
@ $T_J = 175^\circ\text{C}$ using Fig. CT.4

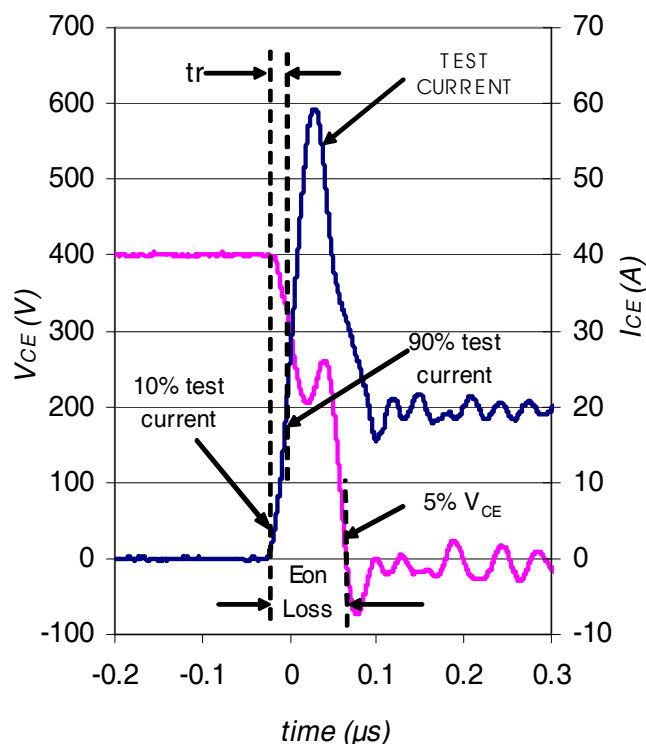
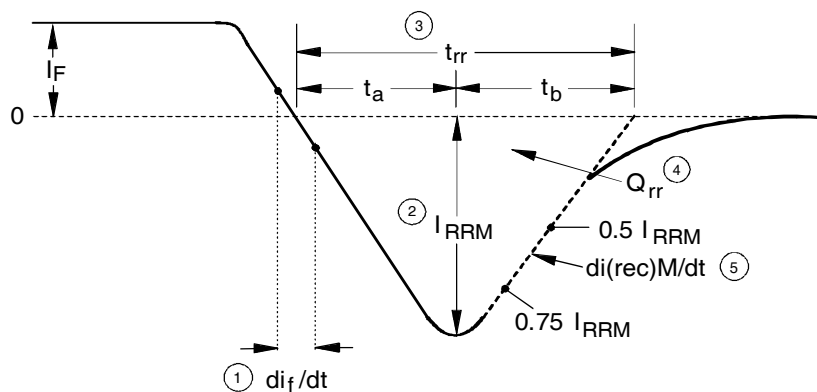


Fig. WF2 - Typ. Turn-on Loss Waveform
@ $T_J = 175^\circ\text{C}$ using Fig. CT.4



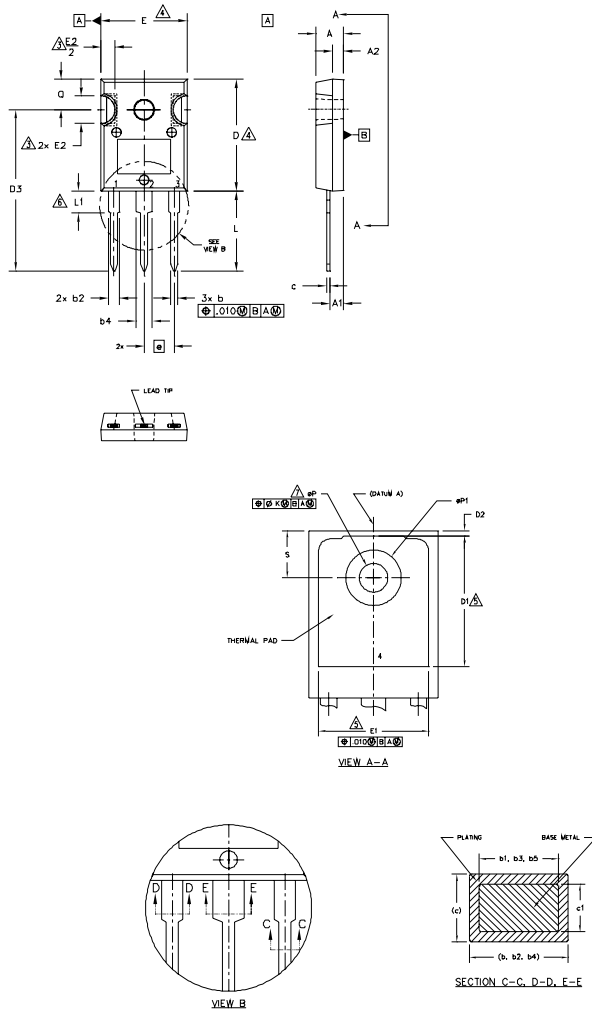
1. di_f/dt - Rate of change of current through zero crossing
2. I_{RRM} - Peak reverse recovery current
3. t_{rr} - Reverse recovery time measured from zero crossing point of negative going I_F to point where a line passing through $0.75 I_{RRM}$ and $0.50 I_{RRM}$ extrapolated to zero current
4. Q_{rr} - Area under curve defined by t_{rr} and I_{RRM}

$$Q_{rr} = \frac{t_{rr} \times I_{RRM}}{2}$$
5. $di_{(rec)M}/dt$ - Peak rate of change of current during t_b portion of t_{rr}

Fig. WF3 - Reverse Recovery Waveform and Definitions

TO-247AC Package Outline

Dimensions are shown in millimeters (inches)



- NOTES:
1. DIMENSIONING AND TOLERANCING AS PER ASME Y14.5M 1994.
 2. DIMENSIONS ARE SHOWN IN INCHES.
 3. CONTOUR OF SLOT OPTIONAL.
 4. DIMENSION D & E DO NOT INCLUDE MOLD FLASH. MOLD FLASH SHALL NOT EXCEED .005" (0.127) PER SIDE. THESE DIMENSIONS ARE MEASURED AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY.
 5. THERMAL PAD CONTOUR OPTIONAL WITHIN DIMENSIONS D1 & E1.
 6. LEAD FINISH UNCONTROLLED IN L1.
 7. ØP TO HAVE A MAXIMUM DRAFT ANGLE OF 1.5 ° TO THE TOP OF THE PART WITH A MAXIMUM HOLE DIAMETER OF .154 INCH.
 8. OUTLINE CONFORMS TO JEDEC OUTLINE TO-247AC .

SYMBOL	DIMENSIONS				NOTES
	INCHES		MILLIMETERS		
	MIN.	MAX.	MIN.	MAX.	
A	.183	.209	4.65	5.31	
A1	.087	.102	2.21	2.59	
A2	.059	.098	1.50	2.49	
b	.039	.055	0.99	1.40	
b1	.039	.053	0.99	1.35	
b2	.065	.094	1.65	2.39	
b3	.065	.092	1.65	2.34	
b4	.102	.135	2.59	3.43	
b5	.102	.133	2.59	3.38	
c	.015	.035	0.38	0.89	
c1	.015	.033	0.38	0.84	
D	.776	.815	19.71	20.70	4
D1	.515	-	13.08	-	5
D2	.020	.053	0.51	1.35	
D3	1.122	1.161	28.50	29.50	
E	.602	.625	15.29	15.87	4
E1	.530	-	13.46	-	
E2	.178	.216	4.52	5.49	
e	.215 BSC		5.46 BSC		
Øk	.010		0.25		
L	.559	.634	14.20	16.10	
L1	.146	.169	3.71	4.29	
ØP	.140	.144	3.56	3.66	
ØP1	-	.291	-	7.39	
Q	.209	.224	5.31	5.69	
S	.217 BSC		5.51 BSC		

PART NUMBERS AFFECTED:

- AUIRGP4PH50S
- AUIRGP4066D1/E
- AUIRGP4063D/E
- AUIRGP50B60PD1/E
- AUIRGP35B60PD/E
- AUIRGP4062D1/E
- AUIRGP65A20D0
- AUIRGP65G20D0
- AUIRGP/F66524D0
- AUIRGP/F76524D0
- AUIRGP/F66548D0
- AUIRGP/F76548D0

LEAD ASSIGNMENTS

HEXFET

- 1.- GATE
- 2.- DRAIN
- 3.- SOURCE
- 4.- DRAIN

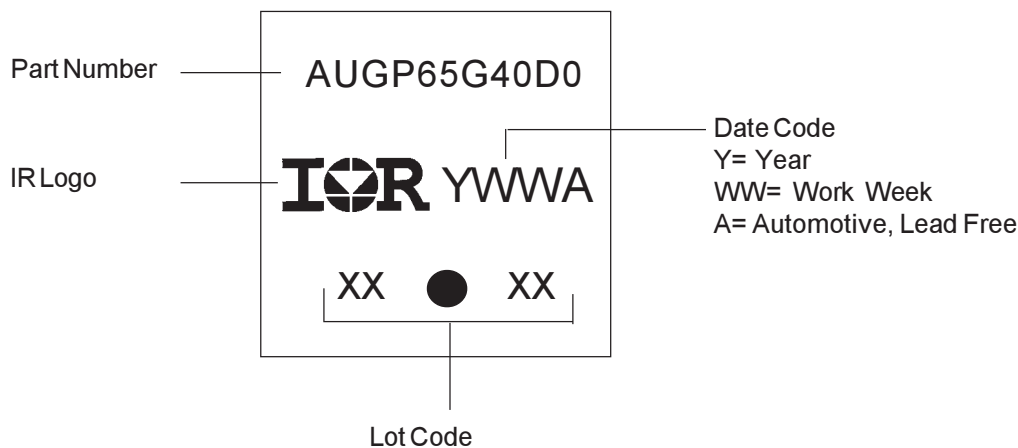
IGBTs, CoPACK

DIODES

- 1.- GATE
- 2.- ANODE/OPEN
- 3.- COLLECTOR
- 4.- CATHODE
- 5.- EMITTER
- 6.- ANODE
- 7.- COLLECTOR

SPECIAL NOTE:
a) ADDED D3 FOR SPECIAL REQUIREMENT

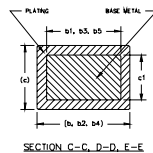
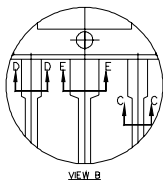
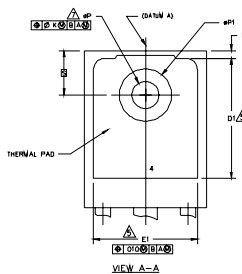
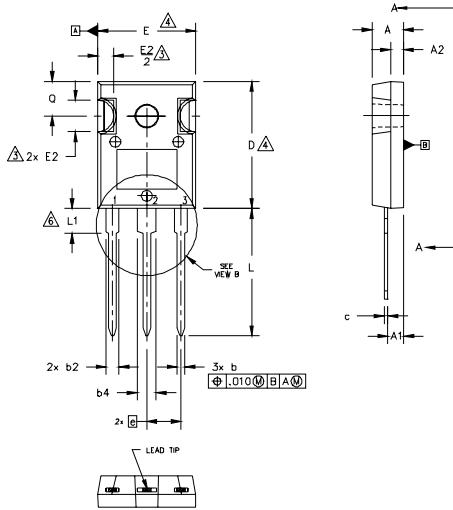
TO-247AC Part Marking Information



Note: For the most current drawing please refer to IR website at <http://www.irf.com/package/>

TO-247AD Package Outline

Dimensions are shown in millimeters (inches)



NOTES:

1. DIMENSIONING AND TOLERANCING AS PER ASME Y14.5M 1994.
2. DIMENSIONS ARE SHOWN IN INCHES.
3. CONTOUR OF SLOT OPTIONAL.
4. DIMENSION D & E DO NOT INCLUDE MOLD FLASH. MOLD FLASH SHALL NOT EXCEED .005" (0.127) PER SIDE. THESE DIMENSIONS ARE MEASURED AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY.
5. THERMAL PAD CONTOUR OPTIONAL WITHIN DIMENSIONS D1 & E1.
6. LEAD FINISH UNCONTROLLED IN L1.
7. ØP TO HAVE A MAXIMUM DRAFT ANGLE OF 1.5 ° TO THE TOP OF THE PART WITH A MAXIMUM HOLE DIAMETER OF .154 INCH.
8. OUTLINE CONFORMS TO JEDEC OUTLINE TO-247AD.

SYMBOL	DIMENSIONS				NOTES
	INCHES		MILLIMETERS		
	MIN.	MAX.	MIN.	MAX.	
A	.183	.209	4.65	5.31	
A1	.087	.102	2.21	2.59	
A2	.059	.098	1.50	2.49	
b	.039	.055	0.99	1.40	
b1	.039	.053	0.99	1.35	
b2	.065	.094	1.65	2.39	
b3	.065	.092	1.65	2.34	
b4	.102	.135	2.59	3.43	
b5	.102	.133	2.59	3.38	
c	.015	.035	0.38	0.89	
c1	.015	.033	0.38	0.84	
D	.776	.815	19.71	20.70	4
D1	.515	-	13.08	-	5
D2	.020	.053	0.51	1.35	
E	.602	.625	15.29	15.87	4
E1	.530	-	13.46	-	
E2	.178	.216	4.52	5.49	
e	.215 BSC		5.46 BSC		
Øk	.010		0.25		
L	.780	.827	19.57	21.00	
L1	.146	.169	3.71	4.29	
ØP	.140	.144	3.56	3.66	
ØP1	-	.291	-	7.39	
Q	.209	.224	5.31	5.69	
S	.217 BSC		5.51 BSC		

LEAD ASSIGNMENTS

HEXFET

- 1.- GATE
- 2.- DRAIN
- 3.- SOURCE
- 4.- DRAIN

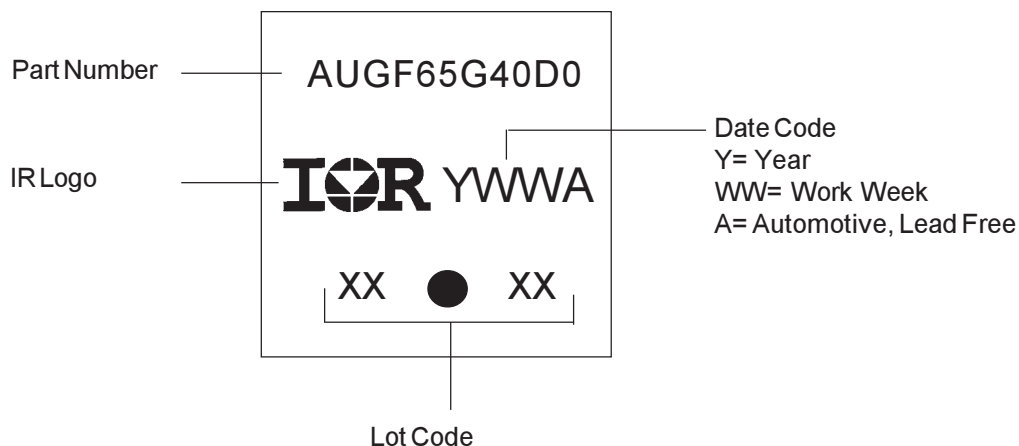
IGBTs, CoPACK

- 1.- GATE
- 2.- COLLECTOR
- 3.- EMITTER
- 4.- COLLECTOR

DIODES

- 1.- ANODE/OPEN
- 2.- CATHODE
- 3.- ANODE

TO-247AD Part Marking Information



Note: For the most current drawing please refer to IR website at <http://www.irf.com/package/>

Qualification Information[†]

Qualification Level		Automotive (per AEC-Q101)	
		Comments: This part number(s) passed Automotive qualification. IR's Industrial and Consumer qualification level is granted by extension of the higher Automotive level.	
Moisture Sensitivity Level		TO-247AC	N/A
		TO-247AD	N/A
ESD	Machine Model	Class M4 (+/- 400V) ^{††} AEC-Q101-002	
	Human Body Model	Class H3B (+/- 8000V) ^{††} AEC-Q101-001	
	Charged Device Model	Class C5 (+/- 1000V) ^{††} AEC-Q101-005	
RoHS Compliant		Yes	

† Qualification standards can be found at International Rectifier's web site: <http://www.irf.com>

†† Highest passing voltage.

Notes:

- ① $V_{CC} = 80\% (V_{CES})$, $V_{GE} = 20V$, $L = 485\mu H$, $R_G = 4.7\Omega$, tested in production $I_{LM} \leq 400A$.
- ② Pulse width limited by max. junction temperature.
- ③ Refer to AN-1086 for guidelines for measuring $V_{(BR)CES}$ safely.
- ④ R_{θ} is measured at T_J of approximately $90^{\circ}C$.
- ⑤ $C_{oes\ eff.}$ is a fixed capacitance that gives the same charging time as C_{oes} while V_{CE} is rising from 0 to $80\% V_{CES}$. $C_{oes\ eff.}(ER)$ is a fixed capacitance that stores the same energy as C_{oes} while V_{CE} is rising from 0 to $80\% V_{CES}$.
- ⑥ Calculated continuous current based on maximum allowable junction temperature.
- ⑦ Nominal current limit is suggested for 400V, 200kHz operation. Actual current rating varies with application and is subjected to T_J and SOA limits.

IMPORTANT NOTICE

Unless specifically designated for the automotive market, International Rectifier Corporation and its subsidiaries (IR) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or services without notice. Part numbers designated with the "AU" prefix follow automotive industry and / or customer specific requirements with regards to product discontinuance and process change notification. All products are sold subject to IR's terms and conditions of sale supplied at the time of order acknowledgment.

IR warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with IR's standard warranty. Testing and other quality control techniques are used to the extent IR deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

IR assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using IR components. To minimize the risks with customer products and applications, customers should provide adequate design and operating safeguards.

Reproduction of IR information in IR data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alterations is an unfair and deceptive business practice. IR is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of IR products or serviced with statements different from or beyond the parameters stated by IR for that product or service voids all express and any implied warranties for the associated IR product or service and is an unfair and deceptive business practice. IR is not responsible or liable for any such statements.

IR products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or in other applications intended to support or sustain life, or in any other application in which the failure of the IR product could create a situation where personal injury or death may occur. Should Buyer purchase or use IR products for any such unintended or unauthorized application, Buyer shall indemnify and hold International Rectifier and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that IR was negligent regarding the design or manufacture of the product.

Only products certified as military grade by the Defense Logistics Agency (DLA) of the US Department of Defense, are designed and manufactured to meet DLA military specifications required by certain military, aerospace or other applications. Buyers acknowledge and agree that any use of IR products not certified by DLA as military-grade, in applications requiring military grade products, is solely at the Buyer's own risk and that they are solely responsible for compliance with all legal and regulatory requirements in connection with such use.

IR products are neither designed nor intended for use in automotive applications or environments unless the specific IR products are designated by IR as compliant with ISO/TS 16949 requirements and bear a part number including the designation "AU". Buyers acknowledge and agree that, if they use any non-designated products in automotive applications, IR will not be responsible for any failure to meet such requirements.

For technical support, please contact IR's Technical Assistance Center
<http://www.irf.com/technical-info/>

WORLD HEADQUARTERS:
101 N. Sepulveda Blvd., El Segundo, California 90245
Tel: (310) 252-7105

Revision History

Date	Comments
9/8/2015	• Removed "short circuit rating on page 1 & 2.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [IGBT Transistors](#) category:

Click to view products by [Infineon](#) manufacturer:

Other Similar products are found below :

[748152A](#) [APT20GT60BRDQ1G](#) [APT50GT60BRG](#) [NGTB10N60FG](#) [STGFW20V60DF](#) [APT30GP60BG](#) [APT45GR65B2DU30](#)
[GT50JR22\(STA1ES\)](#) [TIG058E8-TL-H](#) [IGW40N120H3FKSA1](#) [VS-CPV364M4KPBF](#) [NGTB25N120FL2WAG](#) [NGTG40N120FL2WG](#)
[RJH60F3DPQ-A0#T0](#) [APT40GR120B2SCD10](#) [APT15GT120BRG](#) [APT20GT60BRG](#) [NGTB75N65FL2WAG](#) [NGTG15N120FL2WG](#)
[IXA30RG1200DHGLB](#) [IXA40RG1200DHGLB](#) [APT70GR65B2DU40](#) [NTE3320](#) [IHF40N65R5SXKSA1](#) [APT70GR120J](#)
[APT35GP120JDQ2](#) [IKZA40N65RH5XKSA1](#) [IKFW75N65ES5XKSA1](#) [IKFW50N65ES5XKSA1](#) [IKFW50N65EH5XKSA1](#)
[IKFW40N65ES5XKSA1](#) [IKFW60N65ES5XKSA1](#) [IMBG120R090M1HXTMA1](#) [IMBG120R220M1HXTMA1](#) [XD15H120CX1](#)
[XD25H120CX0](#) [XP15PJS120CL1B1](#) [IGW30N60H3FKSA1](#) [STGWA8M120DF3](#) [IGW08T120FKSA1](#) [IGW75N60H3FKSA1](#)
[HGTG40N60B3](#) [FGH60N60SMD_F085](#) [FGH75T65UPD](#) [STGWA15H120F2](#) [IKA10N60TXKSA1](#) [IHW20N120R5XKSA1](#) [RJH60D2DPP-](#)
[M0#T2](#) [IKP20N60TXKSA1](#) [IHW20N65R5XKSA1](#)