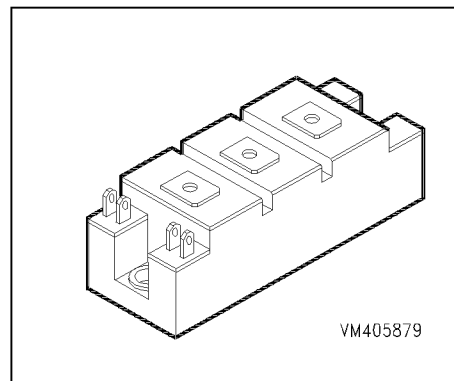


IGBT Power Module

- Single switch with chopper diode at collector
- Including fast free-wheeling diodes
- Package with insulated metal base plate



Type	V_{CE}	I_C	Package	Ordering Code
BSM 75 GAL 120 DN2	1200V	105A	HALF BRIDGE GAL 1	C67076-A2011-A70

Maximum Ratings

Parameter	Symbol	Values	Unit
Collector-emitter voltage	V_{CE}	1200	V
Collector-gate voltage	V_{CGR}	1200	
$R_{GE} = 20 \text{ k}\Omega$			
Gate-emitter voltage	V_{GE}	± 20	
DC collector current	I_C	105	A
$T_C = 25 \text{ }^\circ\text{C}$			
$T_C = 80 \text{ }^\circ\text{C}$		75	
Pulsed collector current, $t_p = 1 \text{ ms}$	I_{Cpuls}	210	
$T_C = 25 \text{ }^\circ\text{C}$			
$T_C = 80 \text{ }^\circ\text{C}$		150	
Power dissipation per IGBT	P_{tot}	625	W
$T_C = 25 \text{ }^\circ\text{C}$			
Chip temperature	T_j	+ 150	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 ... + 125	

Thermal resistance, chip case	R_{thJC}	≤ 0.2	K/W
Diode thermal resistance, chip case	R_{thJCD}	≤ 0.5	
Diode thermal resistance, chip-case, chopper	R_{thJCDC}	≤ 0.36	
Insulation test voltage, $t = 1 \text{ min.}$	V_{is}	2500	Vac
Creepage distance	-	20	mm
Clearance	-	11	
DIN humidity category, DIN 40 040	-	F	sec
IEC climatic category, DIN IEC 68-1	-	40 / 125 / 56	

Electrical Characteristics, at $T_j = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

Static Characteristics

Gate threshold voltage $V_{GE} = V_{CE}, I_C = 2\text{ mA}$	$V_{GE(th)}$	4.5	5.5	6.5	V
Collector-emitter saturation voltage $V_{GE} = 15\text{ V}, I_C = 75\text{ A}, T_j = 25\text{ °C}$	$V_{CE(sat)}$	-	2.5	3	
$V_{GE} = 15\text{ V}, I_C = 75\text{ A}, T_j = 125\text{ °C}$		-	3.1	3.7	
Zero gate voltage collector current $V_{CE} = 1200\text{ V}, V_{GE} = 0\text{ V}, T_j = 25\text{ °C}$	I_{CES}	-	1	1.4	mA
$V_{CE} = 1200\text{ V}, V_{GE} = 0\text{ V}, T_j = 125\text{ °C}$		-	4	-	
Gate-emitter leakage current $V_{GE} = 20\text{ V}, V_{CE} = 0\text{ V}$	I_{GES}	-	-	400	nA

AC Characteristics

Transconductance $V_{CE} = 20\text{ V}, I_C = 75\text{ A}$	g_{fs}	31	-	-	S	
Input capacitance $V_{CE} = 25\text{ V}, V_{GE} = 0\text{ V}, f = 1\text{ MHz}$	C_{iss}	-	5.5	-	nF	
Output capacitance $V_{CE} = 25\text{ V}, V_{GE} = 0\text{ V}, f = 1\text{ MHz}$		C_{oss}	-	0.8		-
Reverse transfer capacitance $V_{CE} = 25\text{ V}, V_{GE} = 0\text{ V}, f = 1\text{ MHz}$		C_{rss}	-	0.3		-

Electrical Characteristics, at $T_j = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

Switching Characteristics, Inductive Load at $T_j = 125\text{ °C}$

Turn-on delay time $V_{CC} = 600\text{ V}$, $V_{GE} = 15\text{ V}$, $I_C = 75\text{ A}$ $R_{Gon} = 15\ \Omega$	$t_{d(on)}$	-	30	60	ns
Rise time $V_{CC} = 600\text{ V}$, $V_{GE} = 15\text{ V}$, $I_C = 75\text{ A}$ $R_{Gon} = 15\ \Omega$	t_r	-	70	140	
Turn-off delay time $V_{CC} = 600\text{ V}$, $V_{GE} = -15\text{ V}$, $I_C = 75\text{ A}$ $R_{Goff} = 15\ \Omega$	$t_{d(off)}$	-	450	600	
Fall time $V_{CC} = 600\text{ V}$, $V_{GE} = -15\text{ V}$, $I_C = 75\text{ A}$ $R_{Goff} = 15\ \Omega$	t_f	-	70	100	

Free-Wheel Diode

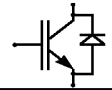
Diode forward voltage $I_F = 75\text{ A}$, $V_{GE} = 0\text{ V}$, $T_j = 25\text{ °C}$ $I_F = 75\text{ A}$, $V_{GE} = 0\text{ V}$, $T_j = 125\text{ °C}$	V_F	-	2 1.8	2.5 -	V
Reverse recovery time $I_F = 75\text{ A}$, $V_R = -600\text{ V}$, $V_{GE} = 0\text{ V}$ $di_F/dt = -900\text{ A}/\mu\text{s}$, $T_j = 125\text{ °C}$	t_{rr}	-	0.125	-	μs
Reverse recovery charge $I_F = 75\text{ A}$, $V_R = -600\text{ V}$, $V_{GE} = 0\text{ V}$ $di_F/dt = -900\text{ A}/\mu\text{s}$ $T_j = 25\text{ °C}$ $T_j = 125\text{ °C}$	Q_{rr}	-	3.2 12	- -	μC

Electrical Characteristics, at $T_j = 25\text{ }^\circ\text{C}$, unless otherwise specified

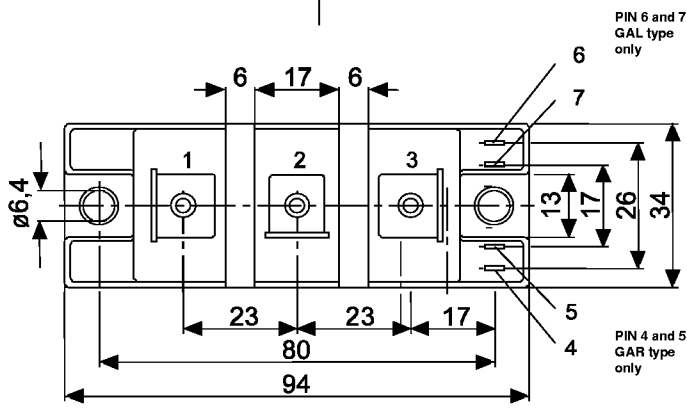
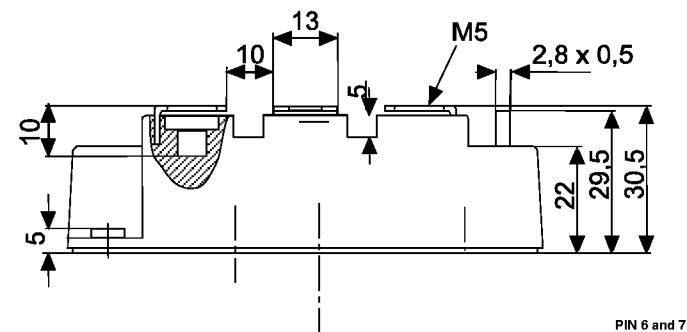
Parameter	Symbol	Values			Unit
		min.	typ.	max.	

Chopper Diode

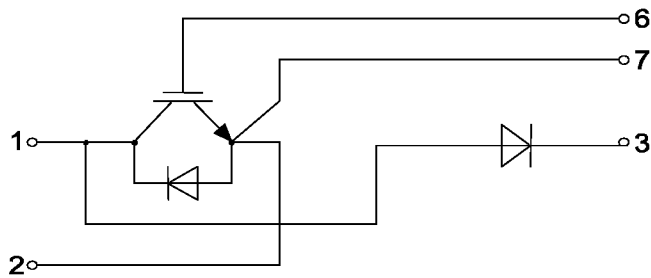
Chopper diode forward voltage $I_{FC} = 100\text{ A}$, $V_{GE} = 0\text{ V}$, $T_j = 25\text{ }^\circ\text{C}$ $I_{FC} = 100\text{ A}$, $V_{GE} = 0\text{ V}$, $T_j = 125\text{ }^\circ\text{C}$	V_{FC}	- -	2 1.8	2.5 -	V
Reverse recovery time, chopper $I_{FC} = 100\text{ A}$, $V_R = -600\text{ V}$, $V_{GE} = 0\text{ V}$ $di_F/dt = -1000\text{ A}/\mu\text{s}$, $T_j = 125\text{ }^\circ\text{C}$	t_{rrC}	-	0.125	-	μs
Reverse recovery charge, chopper $I_{FC} = 100\text{ A}$, $V_R = -600\text{ V}$, $V_{GE} = 0\text{ V}$ $di_F/dt = -1000\text{ A}/\mu\text{s}$ $T_j = 25\text{ }^\circ\text{C}$ $T_j = 125\text{ }^\circ\text{C}$	Q_{rrC}	- -	4 14	- -	μC



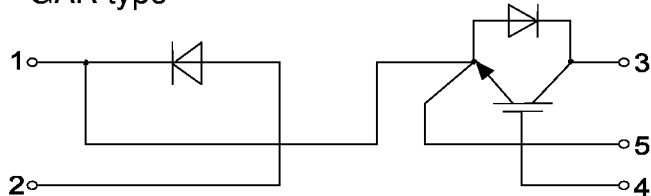
Gehäusemaße / Schaltbild
Package outline / Circuit diagram



GAL type



GAR type



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](#) [QP12W05S-37A](#) [IHF40N65R5SXXSA1](#) [APT70GR120J](#)
[APT35GP120JDQ2](#) [XD15H120CX1](#) [XD25H120CX0](#) [XP15PJS120CL1B1](#) [IGW30N60H3FKSA1](#) [STGWA8M120DF3](#) [IGW08T120FKSA1](#)
[IGW75N60H3FKSA1](#) [FGH60N60SMD_F085](#) [FGH75T65UPD](#) [STGWA15H120F2](#) [IKA10N60TXKSA1](#) [IHW20N120R5XKSA1](#)
[RJH60D2DPP-M0#T2](#) [IKP20N60TXKSA1](#) [IHW20N65R5XKSA1](#) [APT70GR120JD60](#) [AOD5B60D](#) [APT70GR120L](#) [STGWT60H65FB](#)
[STGWT60H65DFB](#) [STGWT40V60DF](#) [STGWT20V60DF](#) [STGB10NB37LZT4](#)