1A1 THRU 1A7

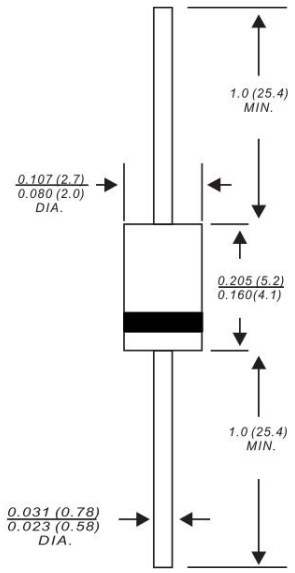
VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.0 Ampere

RoHS COMPLIANT

Features

- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High reliability
- High temperature soldering guaranteed
  260℃/10 seconds,0.375"(9.5mm)lead length at 5 lbs(2.3kg) tension

DO-41



Dimensions in inches and (millimeters)

Mechanical Data

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.012ounce, 0.33 grams

Maximum Ratings and Electrical Characteristics

- Ratings at 25℃ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER		SYMBOLS	1A1	1A2	1A3	1A4	1A5	1A6	1A7	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current(FIG.1) 0.375" (9.5mm) lead length at T_A=100℃		$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)		I_{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A		V_F	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage at	T_A = 25℃	I_R	5.0							μA
	T_A = 125℃		100							
Maximum Full Load Reverse Current, full cycleAverage 0.375 (9.5mm) lead length at T_L=75℃		$I_{R(AV)}$	30							μA
Typical Junction Capacitance (NOTE 1)		C_J	15							pF
Typical Thermal Resistance (NOTE 2)		$R_{\theta JA}$	50							℃/W
Operating and Storage Temperature Range		T_J,T_{STG}	-55 to +150							℃

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance HERom Junction to Ambient at. 375"(9.5mm)lead length, P.C. board mounted.

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Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

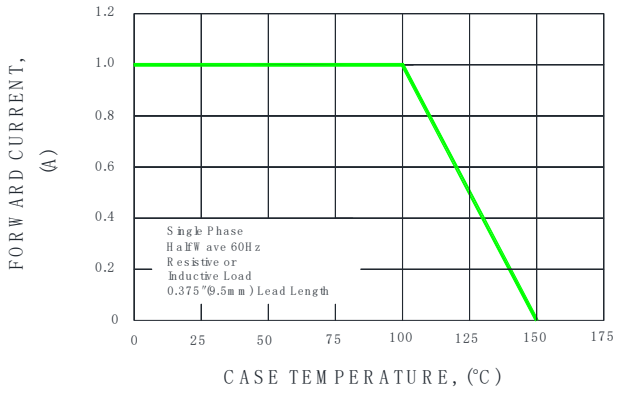


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

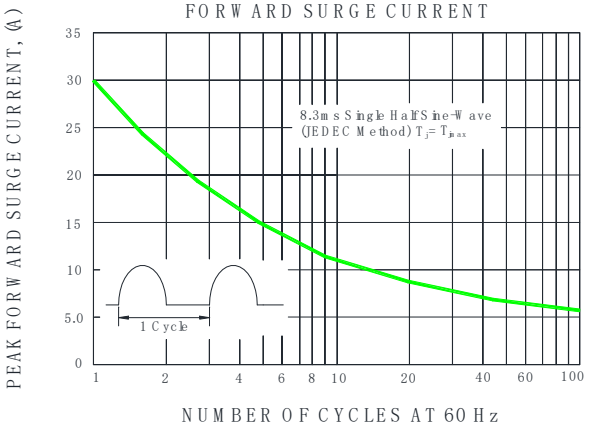


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

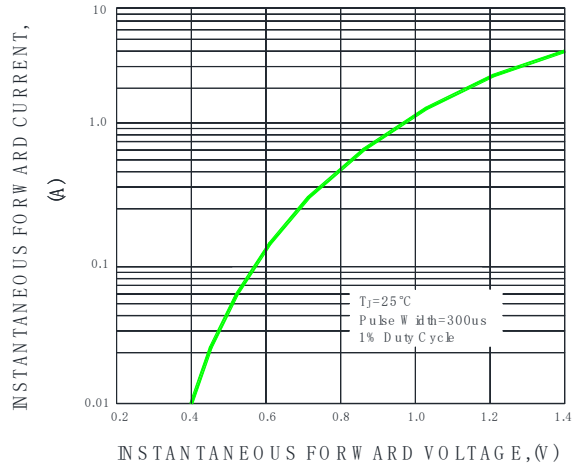


FIG.4-TYPICAL REVERSE CHARACTERISTICS

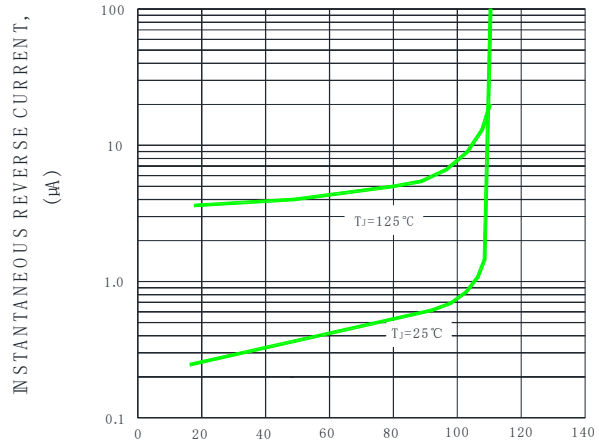
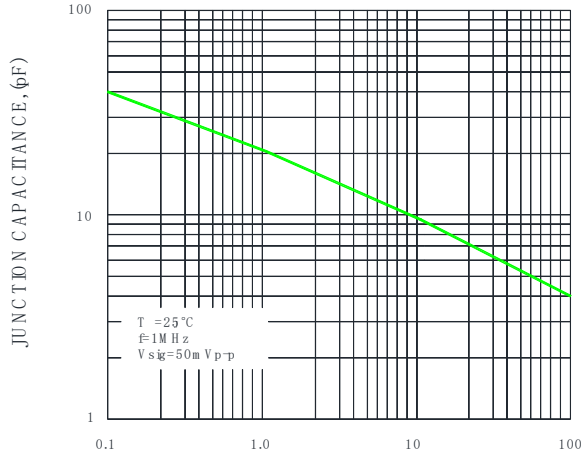


FIG.5-TYPICAL JUNCTION CAPACITANCE



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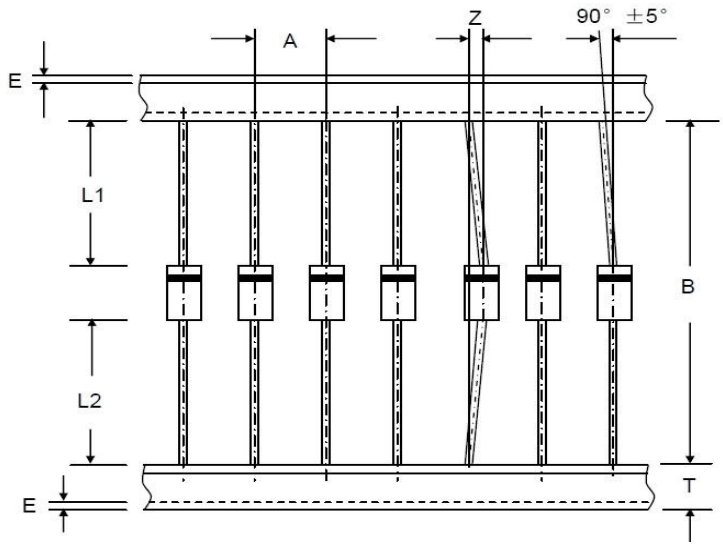
Axial Lead Taping Specifications for Rectifiers



Component Outline	Component Pitch A	Inner Tape Pitch B		Cumulative Tolerance
	±0.5mm	+0.5mm -0.4mm		
DO-41	5.0mm	52.4mm	26.0mm	2.0mm/20pitch

Item	Symbol	Specifications(mm)	Specifications(inch)
Component alignment	Z	1.2 max	0.048 max
Tape width	T	6.0±0.4	0.236±0.016
Exposed adhesive	E	0.8 max	0.032 max
Body eccentricity	IL1-L2I	1.0 max	0.040 max

Inner Box Size

DEVICE TYPE	BOX		CARTON	
	Q'ty(pcs)	Sizo(mm)	Q'ty(pcs)	Sizo(mm)
DO-41	5000	225*75*146	50000	396*256*320

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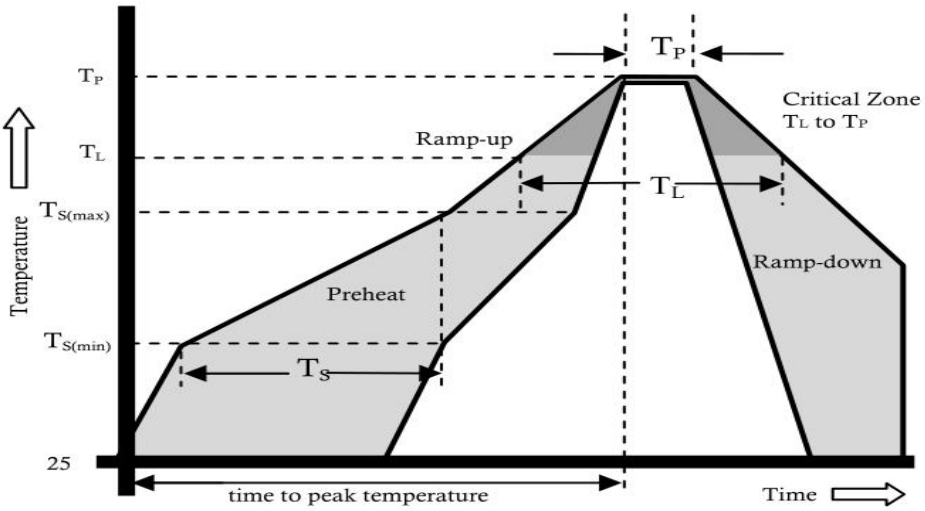
Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T_L) to peak)		3°C/sec. Max.
T_S(max) to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T_L)(Liquidus)	+217°C
	Temperature (T_L)	60-150 secs.
Peak Temp (T_P)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C

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