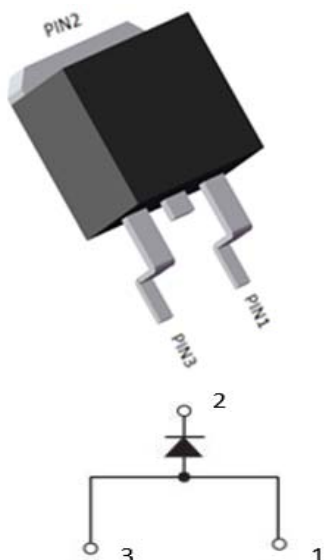


General Purpose Rectifier Diodes



Features

- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 260 °C max. 10 s, per JESD 22-B106

Typical Application

- Input rectification

Mechanical Data

- **Package:** TO-263
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

■Maximum Ratings (T_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MGSB101000
Device marking code			MGSB101000
Repetitive Peak Reverse Voltage per diode	V _{RRM}	V	1000
Average Rectified Output Current @60Hz half sine-wave, R-load, T _c (FIG.1) per diode	I _o	A	10
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25°C per diode	I _{FSM}	A	260
Current Squared Time @1ms≤t≤8.3ms T _j =25°C, rating of per diode	I ² t	A ² s	280.54
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MGSB101000
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =10.0A T _j =25°C	1.1
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM}	uA	V _{RM} =V _{RRM} T _j =25°C	5
			V _{RM} =V _{RRM} T _j =125°C	100
Typical junction capacitance per diode	C _j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	53



MGSB101000

■ Thermal Characteristics (T_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MGSB101000
Thermal Resistance	R _{θJ-C}	°C/W	8.0

■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MGSB101000	1.503	800	/	40000	Reel

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

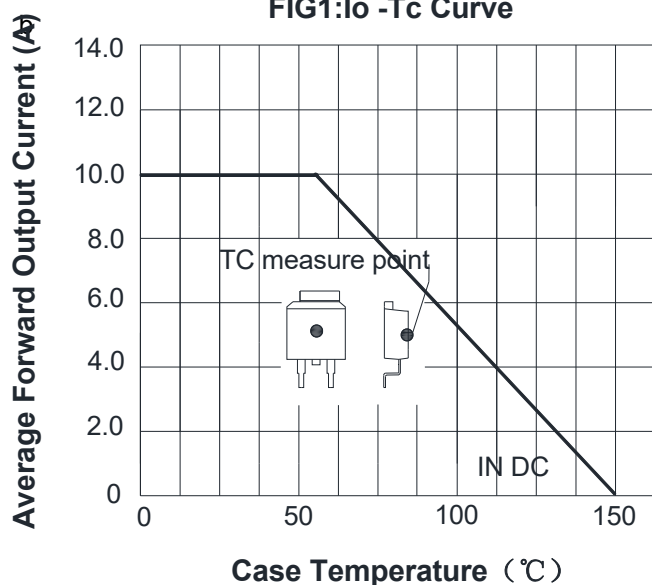


FIG2: Surge Forward Current Capability

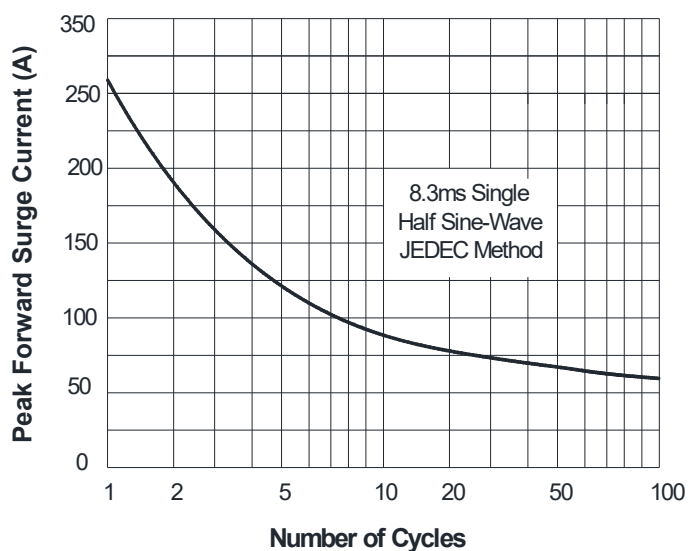


FIG3: Typical Forward Voltage

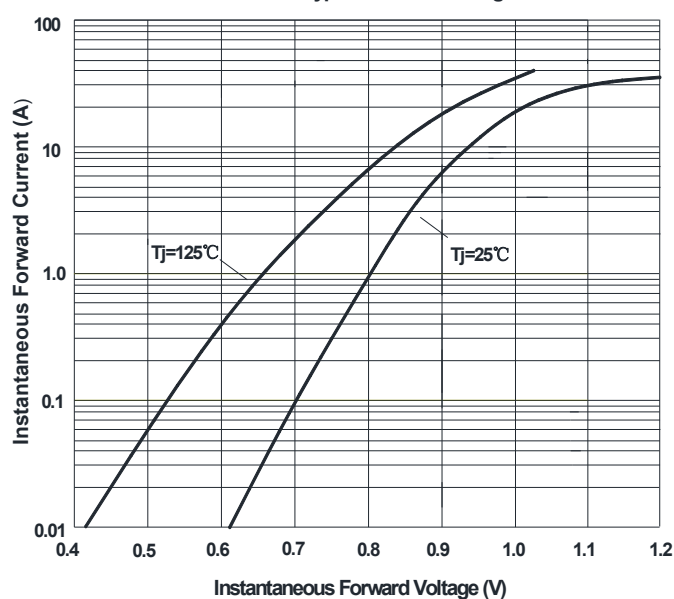
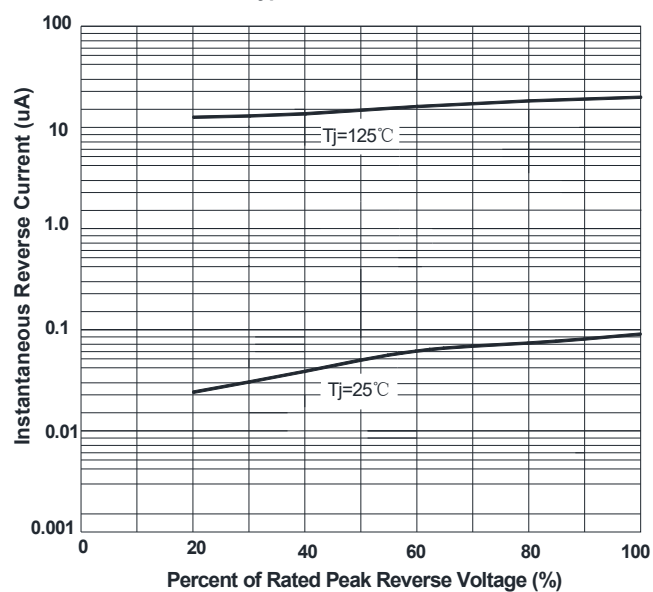
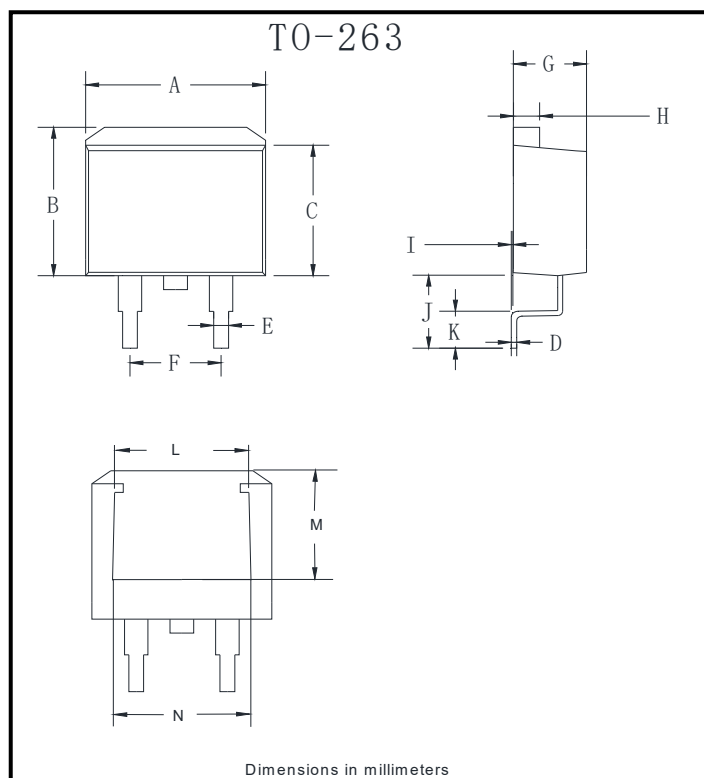


FIG4: Typical Reverse Characteristics

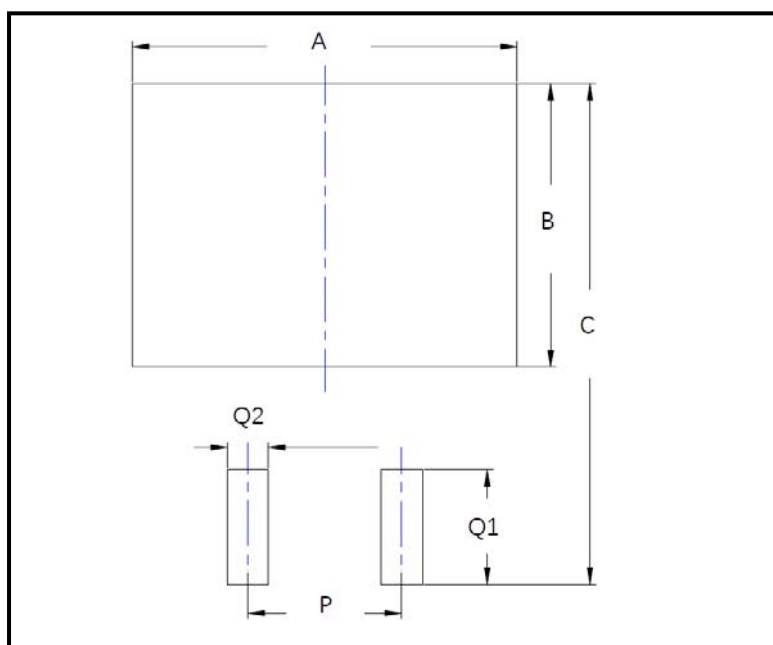


■ Outline Dimensions



TO-263		
Dim	Min	Max
A	9.85	10.45
B	9.7	10.5
C	8.4	9.0
D	0.28	0.64
E	0.68	0.94
F	4.55	5.6
G	4.4	4.8
H	1.14	1.4
I	0	0.2
J	4.9	6.05
K	1.79	2.79
L	7.3	7.9
M	6.2	6.8
N	7.6	8.2

■ Suggested Pad Layout



Dim	Millimeters
A	12.7
B	9.4
C	16.6
P	5.08
Q1	3.8
Q2	1.35



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