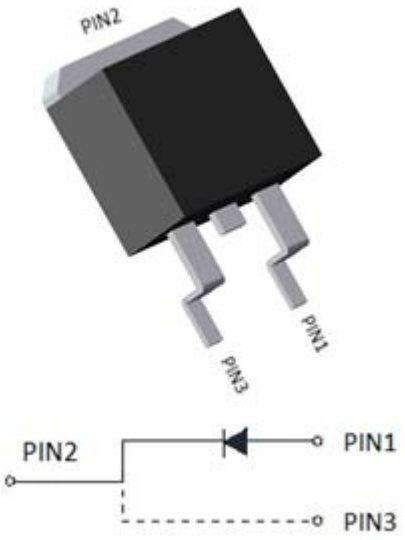
General Purpose Rectifier Diodes



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 (Tj=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	30EPSB16
Device marking code			30EPSB16
Repetitive Peak Reverse Voltage per diode	V_{RRM}	V	1600
Average Rectified Output Current @60Hz half sine-wave, R-load, Tc (FIG.1)	I_o	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25℃ per diode	IFSM	A	275
Current Squared Time @1ms≤t≤8.3ms Tj=25℃，rating of per diode	I^2t	A2s	313
Storage Temperature	Tstg	℃	-55 ~ +150
Junction Temperature	Tj	℃	-55 ~ +150

■Electrical Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	30EPSB16
Maximum instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=30.0A Tj=25℃	1.3
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM}	uA	V_{RM}=V_{RRM} Tj=25℃	5
			V_{RM}=V_{RRM} Tj=125℃	500
Typical junction capacitance per diode	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	60

■Thermal Characteristics （Tj=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	30EPSB16
Thermal Resistance	$R_{\theta J-C}$	℃/W	2.0

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
30EPSB16	1.503	800	/	40000	Reel

■Characteristics (Typical)

b

FIG1:Io -Tc Curve

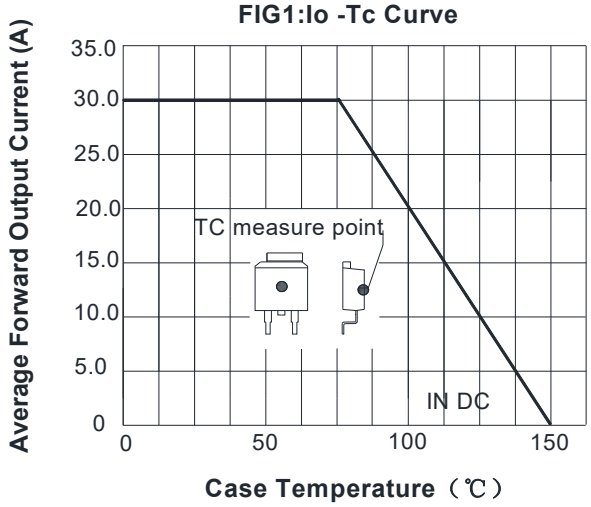


FIG2:Surge Forward Current Capability

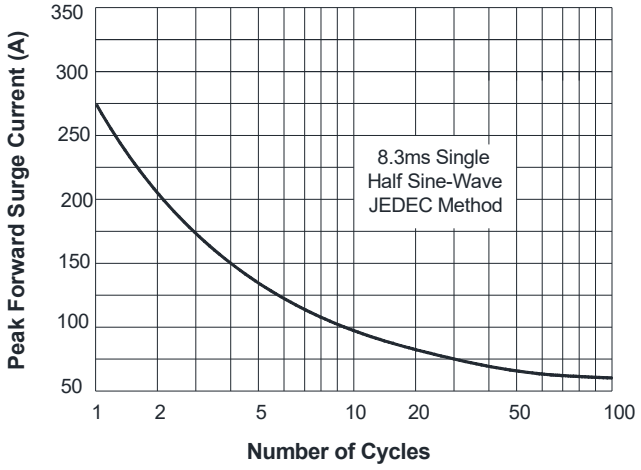


FIG3: Forward Voltage

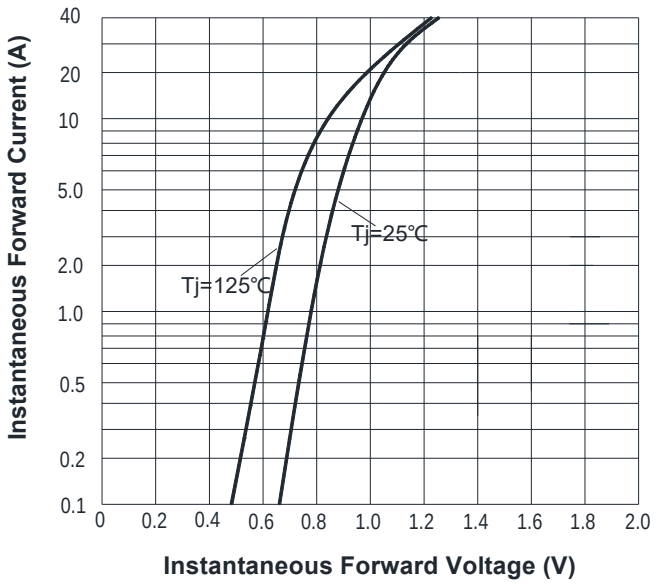
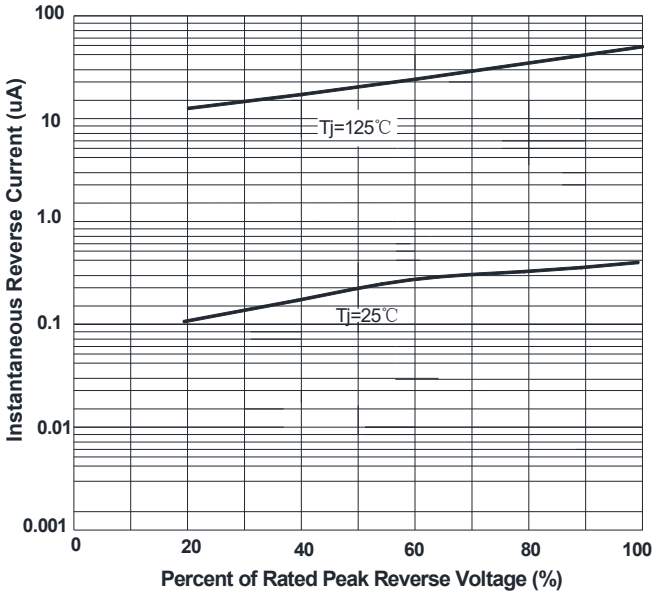
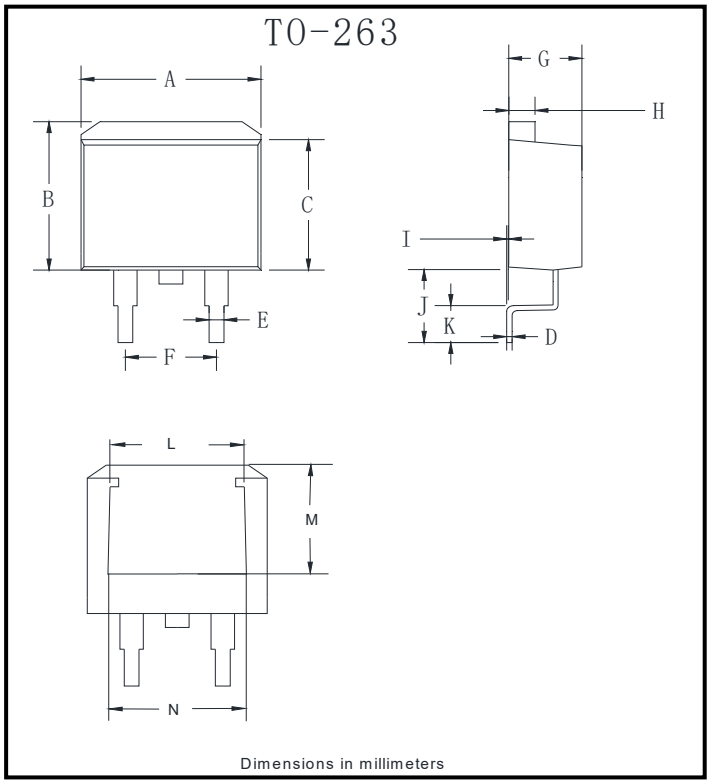


FIG.4: Typical Reverse Characteristics

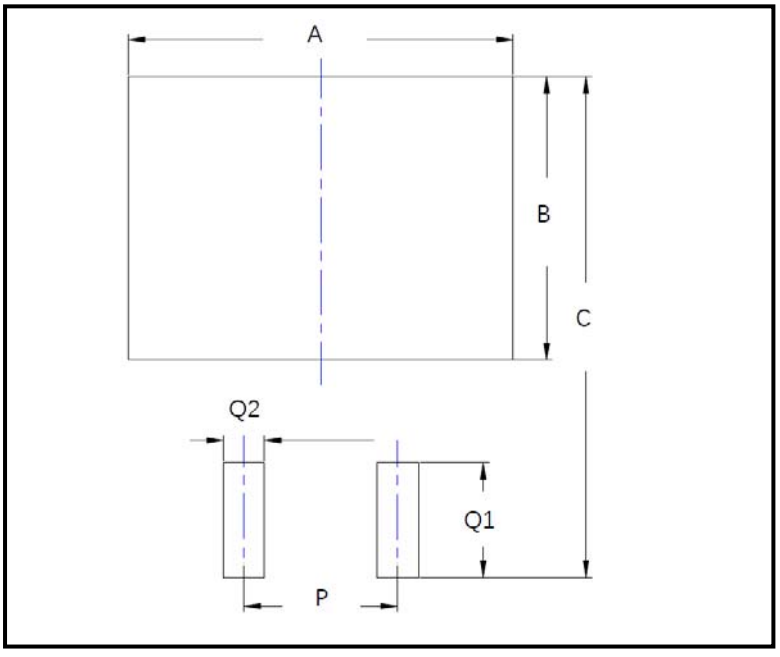


■Outline Dimensions



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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