

- 1N6638US, 1N6642US, 1N6643US AVAILABLE IN JAN, JANTX, JANTXV AND JANS PER MIL-PRF-19500/578
- 1N6638U, 1N6642U, 1N6643U AVAILABLE IN JAN, JANTX, JANTXV AND JANS PER MIL-PRF-19500/578
- SWITCHING DIODES
- NON-CAVITY GLASS PACKAGE
- METALLURGICALLY BONDED

1N6638U & US
1N6642U & US
1N6643U & US

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
Operating Current: 300 mA
Derating: 4.6 mA/°C Above $T_{EC} = +110^{\circ}\text{C}$
Surge Current: $I_{FSM} = 2.5A$, half sine wave, $P_W = 8.3\text{ms}$

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

TYPES	V_{BR} @ I_R =100 μA	V_{RWM}	V_{F1} I_{FM} =10 mA (Pulsed)	V_{F2} @ I_{F2} (Pulsed)		t_{fr} I_F =50 mA	t_{rr} $I_R = 10\text{ mA}$ $I_F = 10\text{ mA}$ $I_{REC} = 1\text{ mA}$
	V (pk)	V (pk)	V dc	V dc	mA	ns	ns
1N6638U & US	150	125	0.8	1.1	200	20	4.5
1N6642U & US	100	75	1.0	1.2	100	20	5.0
1N6643U & US	75	50	1.0	1.2	100	20	6.0

TYPES	I_{R1}	I_{R2}	I_{R3}	I_{R4}	C_{T1}	C_{T2}
	V_R = 20 V	@ V_R = V_{RWM}	$V_R = 20\text{ V}$ $T_A = 150^{\circ}\text{C}$	$V_R = V_{RWM}$ $T_A = 150^{\circ}\text{C}$	$V_R =$ 0V	$V_R =$ 1.5V
	nA dc	μA dc	μA dc	μA dc	pF	pF
1N6638U & US	35	0.5	50	100	2.5	2.0
1N6642U & US	25	0.5	50	100	5.0	2.8
1N6643U & US	50	0.5	75	160	5.0	2.8

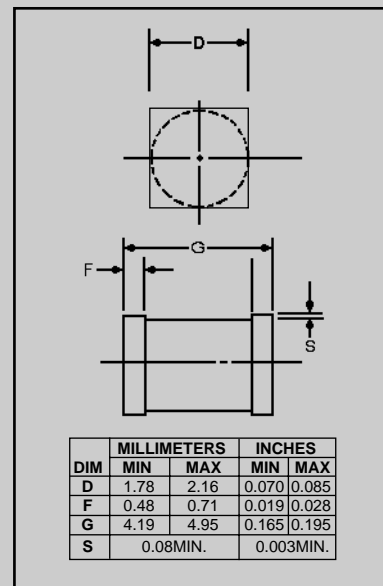


FIGURE 1

DESIGN DATA

CASE: D-5D, Hermetically sealed glass case, per MIL-PRF- 19500/578

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\theta JEC}$):
50 °C/W maximum at L = 0

THERMAL IMPEDANCE: ($Z_{\theta JX}$): 25
°C/W maximum

POLARITY: Cathode end is banded.

MOUNTING SURFACE SELECTION:
The Axial Coefficient of Expansion (COE) of this device is approximately + 4PPM / °C. The COE of the Mounting Surface System should be selected to provide a suitable match with this device.



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IN6638U&US, IN6642U&US and IN6643U&US

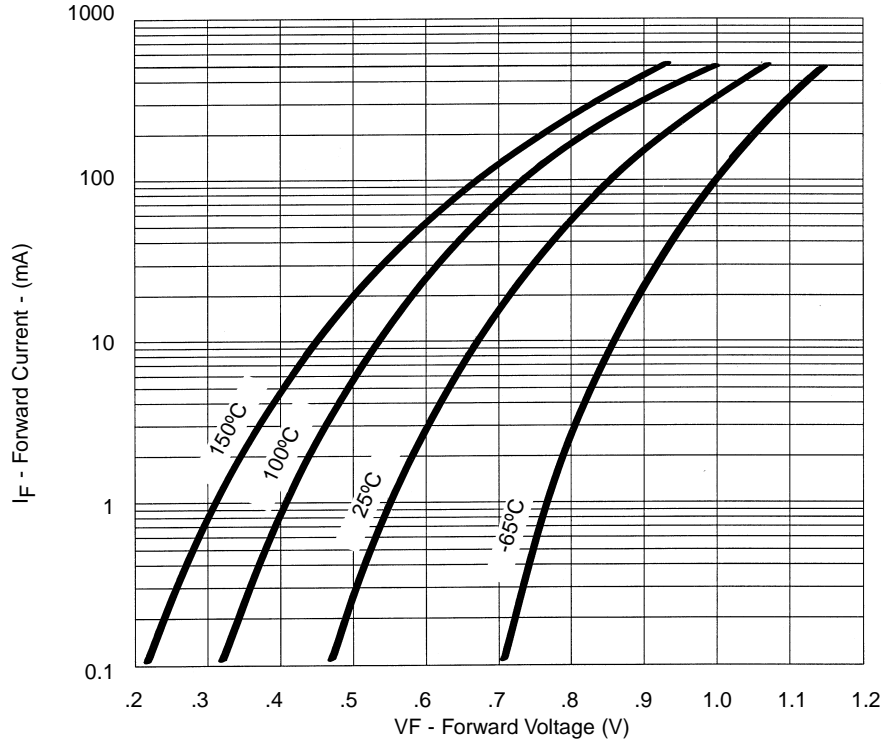


FIGURE 2
Typical Forward Current
vs Forward Voltage

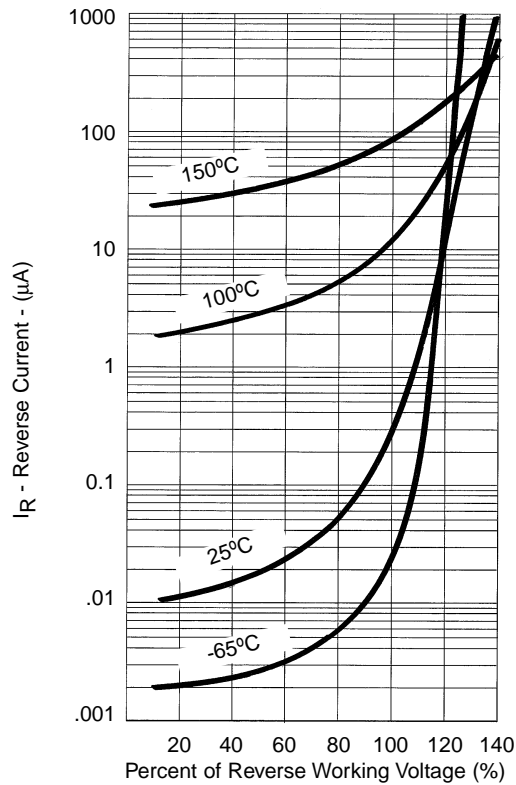


FIGURE 3
Typical Reverse Current
vs Reverse Voltage

NOTE : All temperatures shown on graphs are junction temperatures