



THE DATASHEET OF
3N257



2KBP005M/3N253 - 2KBP10M/3N259

Bridge Rectifiers

Features

- Surge overload rating: 60 amperes peak.
- Reliable low cost construction utilizing molded plastic technique.
- UL certified, UL #E111753.



* The nodules on the package may not be present on the actual parts.

Absolute Maximum Ratings * $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value							Units
		005M	01M	02M	04M	06M	08M	10M	
		253	254	255	256	257	258	259	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
V_{RMS}	Maximum RMS Bridge Input Voltage	35	70	140	280	420	560	700	V
V_R	DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, @ $T_A = 50^\circ\text{C}$	2.0							A
I_{FSM}	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	60							A
T_{STG}	Storage Temperature Range	-55 to +150							$^\circ\text{C}$
T_J	Junction Temperature	-55 to +150							$^\circ\text{C}$

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	4.7	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient, * per leg	18	$^\circ\text{C/W}$

* Device mounted on PCB with $0.47 \times 0.47''$ ($12 \times 12\text{mm}$).

Electrical Characteristics $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_F	Forward Voltage, per element @ 3.14A	1.1	V
I_R	Reverse Current, per element @ Rated V_R	$T_A = 25^\circ\text{C}$	5.0 μA
		$T_A = 125^\circ\text{C}$	500 μA
	I^2t Rating for Fusing $t < 8.35\text{ms}$	15	A^2s
C_T	Total Capacitance, per leg $V_R = 4.0\text{ V}, f = 1.0\text{ MHz}$	25	pF

Typical Performance Characteristics

Figure 1. Forward Curve Derating Curve

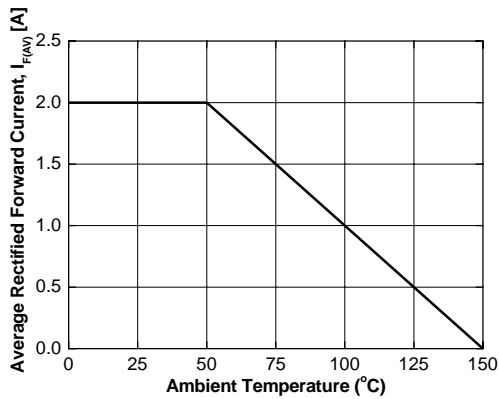


Figure 2. Forward Voltage Characteristics

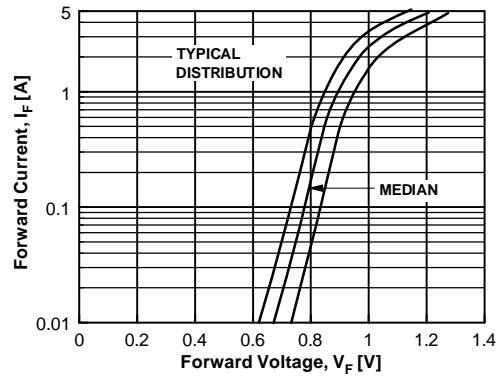


Figure 3. Reverse Current vs Reverse Voltage

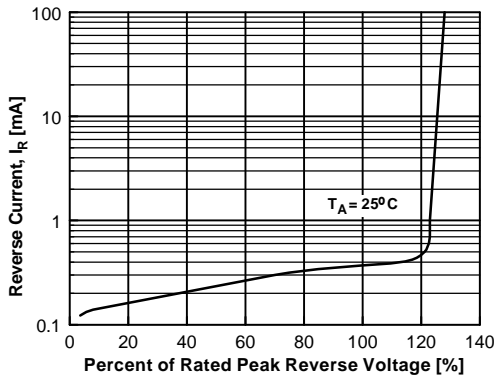
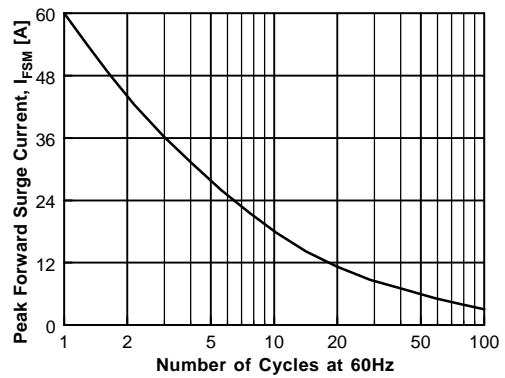


Figure 4. Non-Repetitive Surge Current





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