

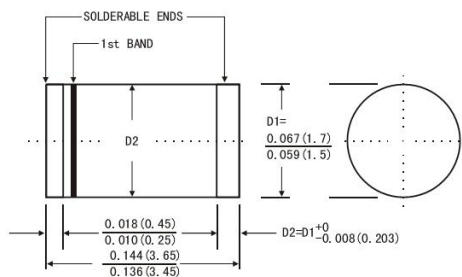


LM4001 THRU LM4007

SURFACE MOUNT RECTIFIERS

REVERSE VOLTAGE: 50 - 1000 V CURRENT: 1.0 A

MiniMELF (DO-213AA)



Dimensions in millimeters

FEATURES

The plastic package carries Underwrites Laboratory Flammability classification 94V-0
For surface mounted application

MECHANICAL DATA

Case: MiniMELF(DO-213AA), molded plastic body
Terminals: Lead solderable per MIL-STD-750, method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

TYPE NUMBER		LM 4001	LM 4002	LM 4003	LM 4004	LM 4005	LM 4006	LM 4007	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current $T_A=75$	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25							A
Maximum forward voltage at 1.0A	V_F	1.1							V
Maximum DC reverse current @ $T_A=25$ at rated DC blocking voltage @ $T_A=125$	I_R	50							μA
Typical junction capacitance (NOTE 1)	C_j	15							pF
Typical thermal resistance (NOTE 2)	$R_{j\theta L}$	75							/W
Typical thermal resistance (NOTE 3)	$R_{j\theta A}$	30							/W
Operating temperature range	T_j	- 65 --- + 175							
Storage temperature range	T_{STG}	- 65 --- + 175							

NOTES: 1. Measured at 1.0MHz and applied average voltage of 4.0V DC.

2. Thermal resistance junction to lead, 6.0 mm² copper pads to each terminal.

3. Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.

RATINGS AND CHARACTERISTIC CURVES LM4001 THRU LM4007

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

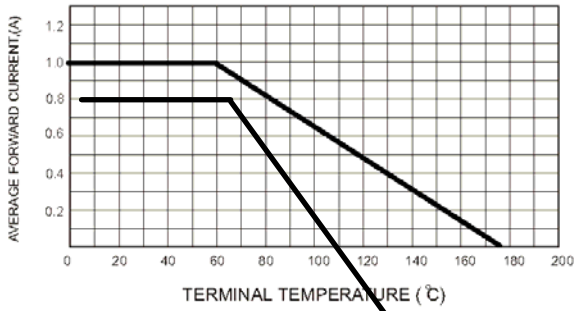


FIG.2-TYPICAL FORWARD CHARACTERISTICS

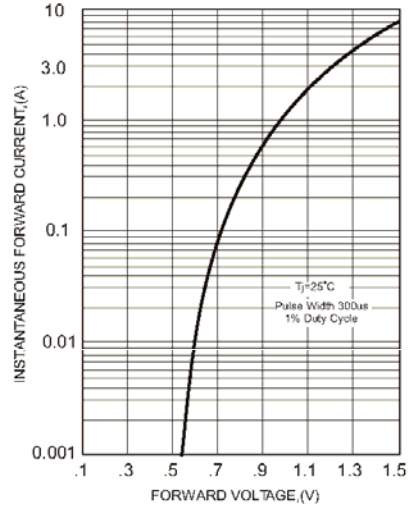


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

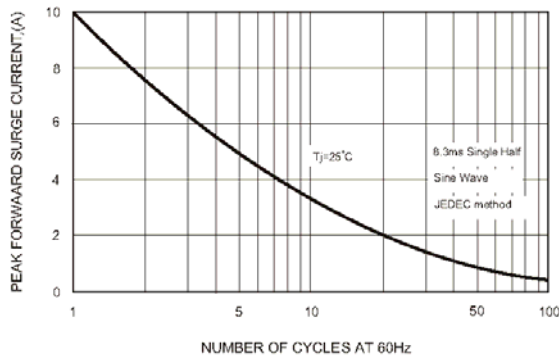


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

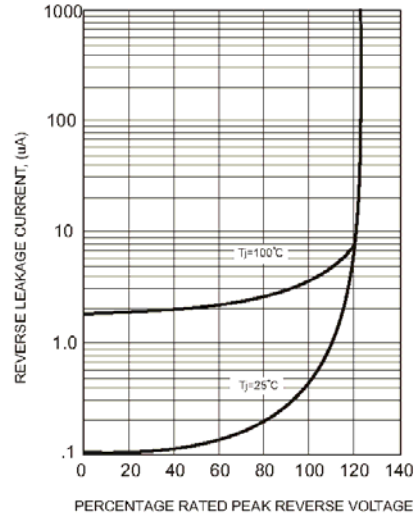


FIG.4-TYPICAL JUNCTION CAPACITANCE

