

FEATURES

- EXTREMELY LOW VF
- LOW STORED CHARGE, MAJORITY CARRIER CONDUCTION
- LOW POWER LOSS / HIGH EFFICIENCY
- UL 94V0 FLAME RETARDANT EPOXY MOLDING COMPOUND
- HALOGENFREE



MECHANICAL DATA

- CASE : TRANSFER MOLDED
- LEADS : SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY : AS MARKED
- WEIGHT : 0.095GRAMS(APPROXIMATELY)



TO-277

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%

RATINGS	SYMBOL	PMEG045V100EPDZ-JSM	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	45	V
MAXIMUM RMS VOLTAGE	V_{RMS}	31.5	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	45	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT SEE FIG.1 PER LEG	I_o	10	A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD PER LEG	I_{FSM}	200	A
STORAGE TEMPERATURE RANGE	T_{STG}	-65 To + 175	°C
OPERATING JUNCTION TEMPERATURE RANGE	T_j	-55 To + 150	°C

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	PMEG045V100EPDZ-JSM	UNITS
MAXIMUM FORWARD VOLTAGE AT $I_F = 10A$ $T_j = 25^\circ C$	VF	0.55	V
$T_j = 125^\circ C$		0.45	
TYPICAL FORWARD VOLTAGE AT $I_F = 1A$ $T_j = 125^\circ C$		0.35	
TYPICAL FORWARD VOLTAGE AT $I_F = 3A$ $T_j = 125^\circ C$		0.40	
TYPICAL FORWARD VOLTAGE AT $I_F = 5A$ $T_j = 125^\circ C$		0.42	
MAXIMUM REVERSE CURRENT AT 25°C PER LEG (NOTE 1)	I_R	0.1	mA
MAXIMUM REVERSE CURRENT AT 125°C PER LEG (NOTE 1)	I_R	20	mA

THERMAL CHARACTERISTICS ($T_c = 25^\circ C$ UNLESS OTHERWISE NOTED)

PARAMETER	SYMBOL	PMEG045V100EPDZ-JSM	UNITS
TYPICAL THERMAL RESISTANCE JUNCTION TO CASE PER LEG	$R_{θjc}$	23	°C/W

NOTES : 1. PULSE TEST: 300μS PULSE WIDTH, 1% DUTY CYCLE.

RATINGS AND CHARACTERISTIC CURVES

FIG. 1-FORWARD CURRENT DERATING CURVE

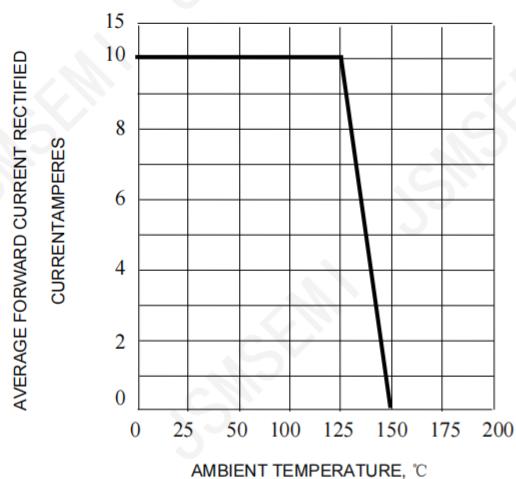


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE RATING

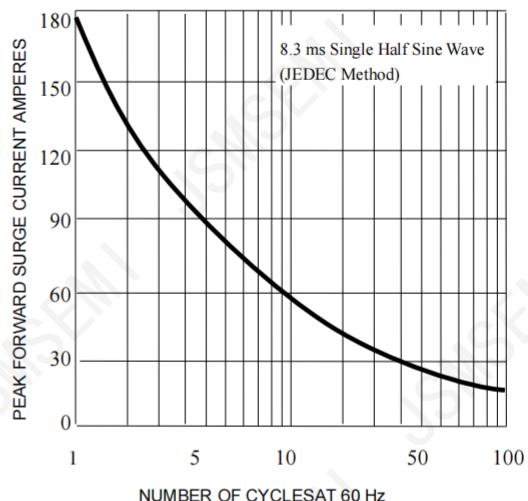


FIG. 3-TYPICALREVERSE CHARACTERISTICS

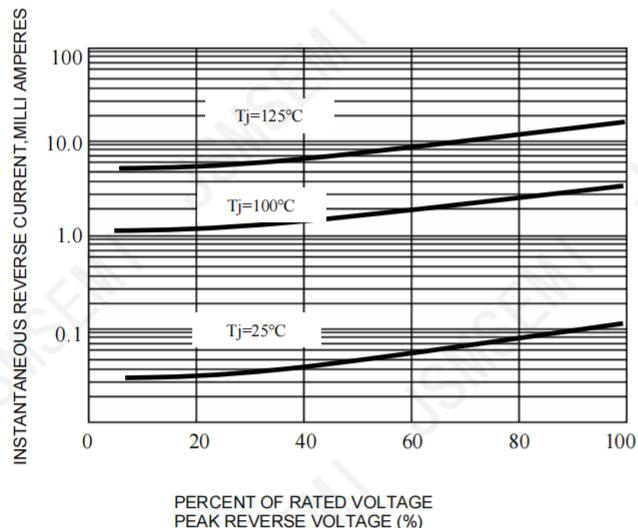
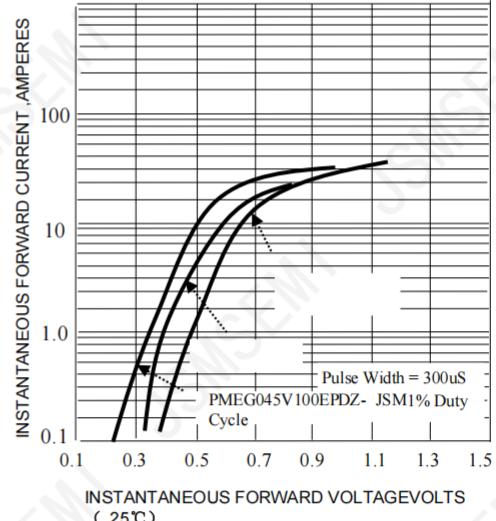
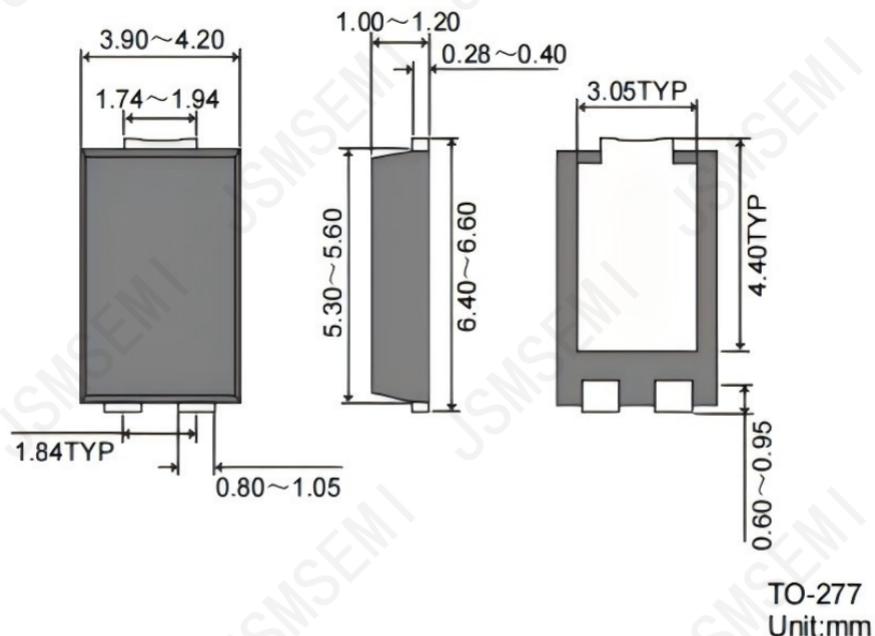


FIG. 4-TYPICALINSTANTANEOUS FORWARD CHARCTERISTICS

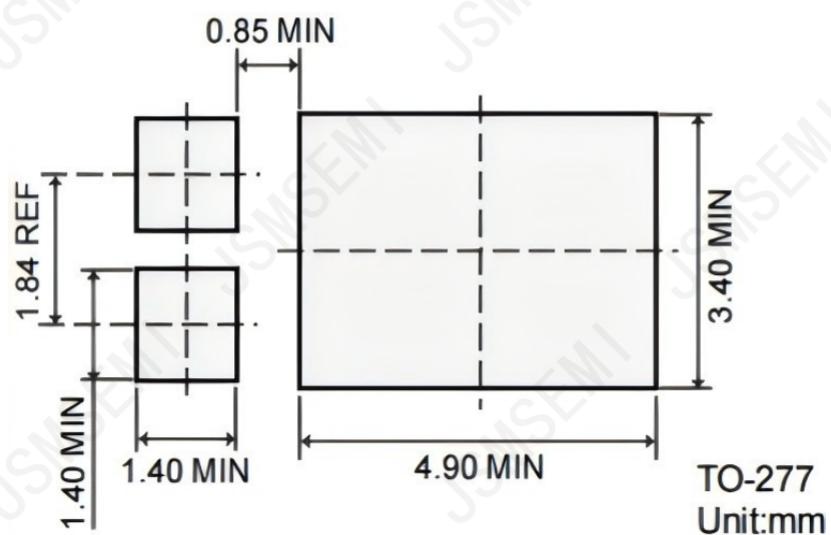


PACKAGE OUTLINE DIMENSIONS



TO-277
Unit:mm

SUGGESTED SOLDER PAD LAYOUT



TO-277
Unit:mm

Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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