Pb Free Plating Product

V10P10-M3

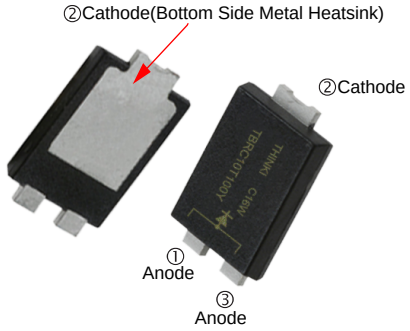
THINKI 10 Ampere,100 Volt Trench Process Low Vf Schottky Barrier Rectifier

Features
- ThinkiSemi matured trench barrier schottky
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- High surge current capability

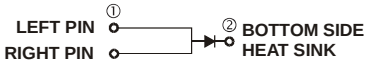
Application
- Inverter/Amplifier
- Photovoltaic Solar Cell Protection/SMPS
- Battery Reverse Protection Circuit/Charger

Mechanical Data
- Case: Heatsink SMD TO-277B/SMPC-SQ outline
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Solderable per MIL-STD-202 method 208
- Polarity: As marked on diode body
- Mounting position: Any
- Weight: 0.098 gram approximately

TO-277B/SMPC-SQ Unit : inch (mm)



Internal Configuration



Note: Pins Left & Right must be electrically connected at the printed circuit board.

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	V10P10-M3	UNIT
Marking code on the device		V10P10-M3	
Repetitive peak reverse voltage	V_{RRM}	100	V
Reverse voltage, total rms value	$V_{R(RMS)}$	70	V
Forward current	I_F	10	A
Surge peak forward current, 8.3ms single half sine wave superimposed on rated load	I_{FSM}	160	A
Junction temperature	T_J	-55 to +150	°C
Storage temperature	T_{STG}	-55 to +150	°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\Theta JL}$	11	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage(1)	I_F = 5A, T_J = 25°C	V_F	0.51	-	V
	I_F = 10A, T_J = 25°C		0.60	0.68	V
	I_F = 5A, T_J = 125°C		0.42	-	V
	I_F = 10A, T_J = 125°C		0.52	0.60	V
Reverse current @ rated V_R(2)	T_J = 25°C	I_R	-	150	μA
	T_J = 125°C		-	30	mA

Notes:
1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

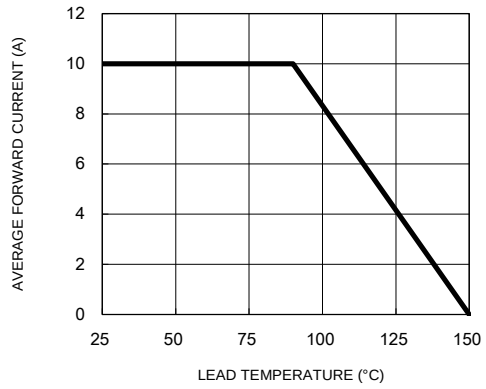


Fig.2 Typical Junction Capacitance

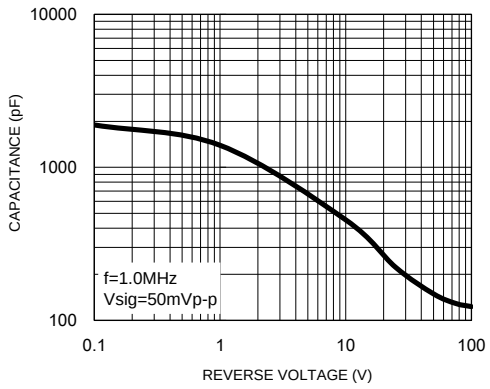


Fig.3 Typical Reverse Characteristics

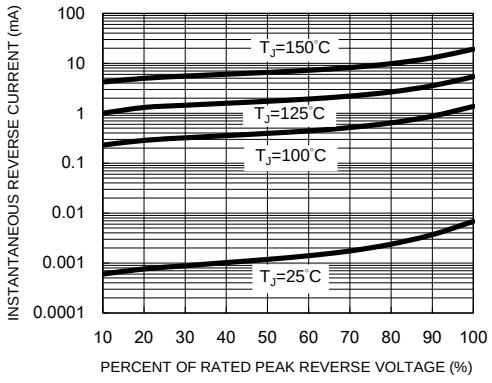


Fig.4 Typical Forward Characteristics

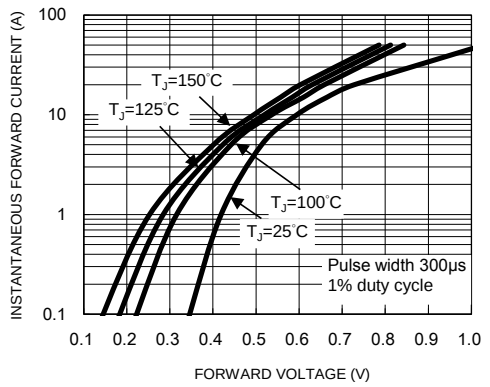
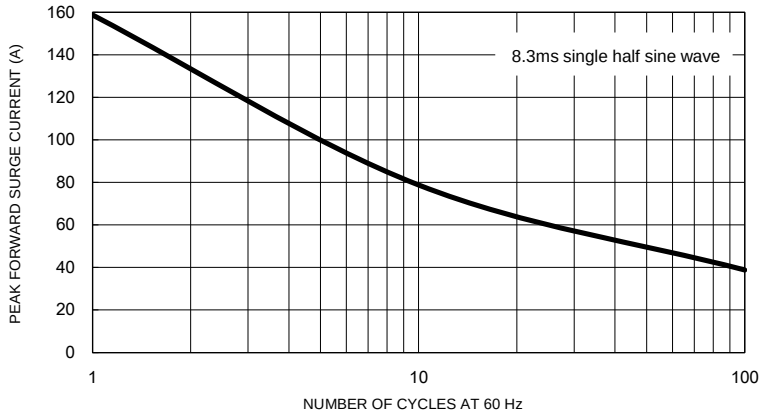
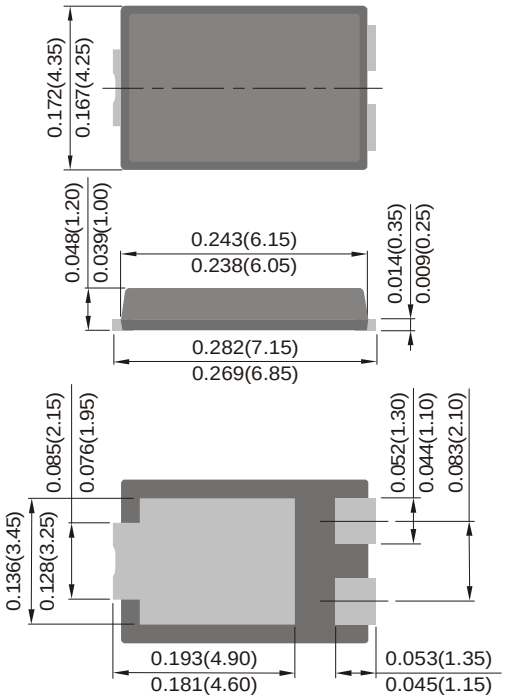


Fig.5 Maximum Non-Repetitive Forward Surge Current



TO-277B/SMPC-SQ PACKAGE OUTLINE DIMENSIONS



TO-277B/SMPC-SQ SUGGESTED PAD LAYOUT