FM15L50

15.0A Surface Mount Schottky Barrier Rectifiers- 50V

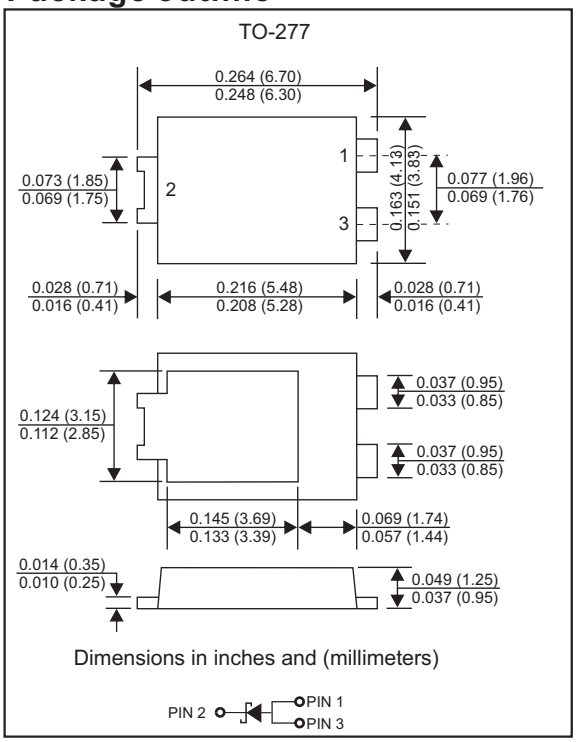
Features

- Ultra Low Forward Voltage Drop .
- Very low profile-typical height of 1.10mm
- Low Power Losses,High Efficiency Operation
- Low Thermal Resistance Package.
- High Operating Junction Temperature.
- Suffix "-H" indicates Halogen free parts, ex. FM15L50-H.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : TO-277 ,molded Plastic
- Terminals:Solderable per MIL-STD-750,Method 2026
- Marking:SL1550 / FM15L50
- Weight:0.093 grams(approx)

Package outline



Maximum ratings (AT T_A=25°C unless otherwise noted)

Parameter	Symbol	FM15L50	Unit
DC Blocking Voltage Working Peak Reverse Voltage Repetitive Peak Reverse Voltage	V_{DC} V_{RWM} V_{RRM}	50	V
RMS Reverse Voltage	V_{RMS}	35	V
Average Forward Rectified Current	$I_{F(AV)}$	15.0	A
Peak Forward Surge Current,8.3ms Half Sine-wave(T_A=25°C)	I_{FSM}	280	A
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

Electrical Characteristics (AT T_A=25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	MIN.	TYP.	MAX.	Unit
Reverse Breakdown Voltage	I_R=0.5mA,T_J=25°C	V_B	50	-	-	V
Forward voltage	I_F=7.5A,T_J=25°C	V_F	-	0.38	-	V
	I_F=15A,T_J=25°C		-	0.45	0.48	
Reverse current	V_R=50V,T_J=25°C	I_R	-	0.05	0.3	mA
	V_R=50V,T_J=100°C		-	5	15	

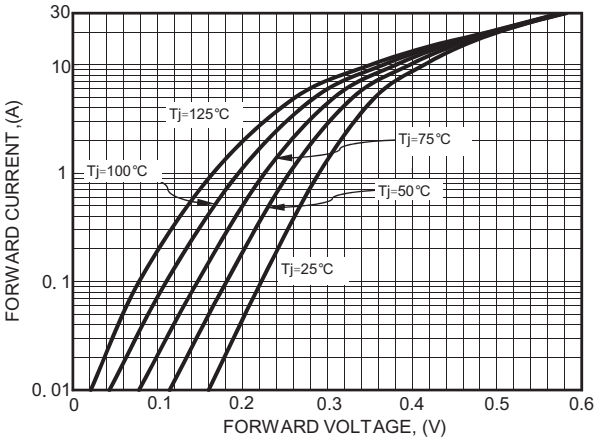
Thermal Characteristics

Parameter	Symbol	FM15L45	Unit
Typical thermal resistance junction to ambient (Note 1) Typical thermal resistance junction to case (Note 1)	$R_{\theta JA}$ $R_{\theta JC}$	13 2	°C/W °C/W

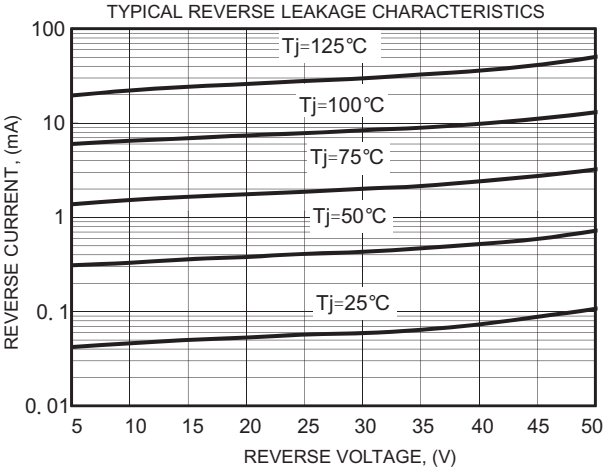
Note 1: Mounted on FR-4 PCB copper pad area. Cathode pad dimensions 4.95mm x 3.4mm.
Anode pad dimensions 1.55mm x 5.0mm.

Rating and characteristic curves

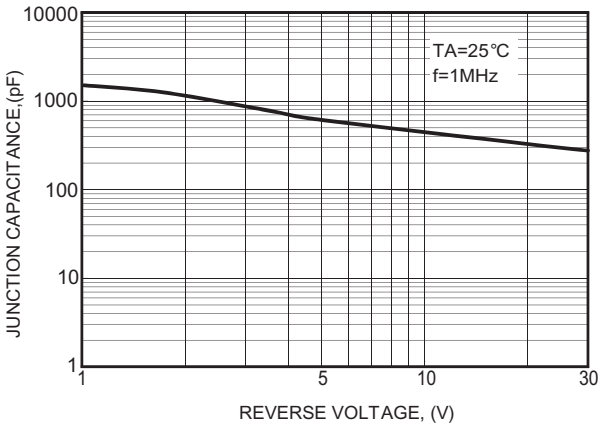
TYPICAL FORWARD CHARACTERISTICS



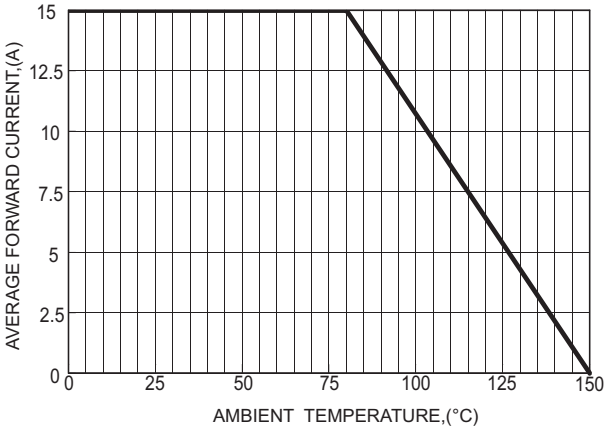
TYPICAL REVERSE LEAKAGE CHARACTERISTICS



TYPICAL JUNCTION CAPACITANCE



TYPICAL FORWARD CURRENT DERATING CURVE



MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT