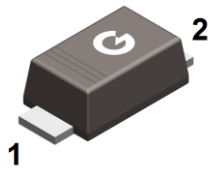
Schottky Barrier Rectifier

TMBRX220H–TMBRX245H

Features

- Metal silicon junction, majority carrier conduction
- High forward surge current capability
- Low forward voltage drop
- High temperature soldering guaranteed: 260°C @ 10s
- Robust guarding for over voltage protection
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



SOD-123FL

Mechanical Data

- Case: SOD-123FL
- Molding compound: UL flammability classification rating 94-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TMBRX220H	SOD-123FL	10000 pcs / Tape & Reel	H22
TMBRX230H	SOD-123FL	10000 pcs / Tape & Reel	H23
TMBRX240H	SOD-123FL	10000 pcs / Tape & Reel	H24
TMBRX245H	SOD-123FL	10000 pcs / Tape & Reel	H245

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	TMBRX 220H	TMBRX 230H	TMBRX 240H	TMBRX 245H	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	45	V
RMS Reverse Voltage	V_{RMS}	14	21	28	31.5	V
DC Blocking Voltage	V_{DC}	20	30	40	45	V
Average Forward Output Current	I_{F_AV}	2.0				A
Peak Forward Surge Current, 8.3ms Single Half Sine wave	I_{FSM}	50				A

Thermal Characteristics

Parameter	Symbol	TMBRX 220H	TMBRX 230H	TMBRX 240H	TMBRX 245H	Unit
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	85				°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	23				°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	15				°C/W
Operating Junction Temperature Range	T_J	-55 ~ +150				°C
Storage Temperature Range	T_{STG}	-55 ~ +150				°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	I_R = 100μA, TMBRX220H	20	-	-	V
		I_R = 100μA, TMBRX230H	30	-	-	V
		I_R = 100μA, TMBRX240H	40	-	-	V
		I_R = 100μA, TMBRX245H	45	-	-	V
Forward Voltage *2	V_F	I_F = 2A	-	-	0.55	V
Maximum Peak Reverse Current *3	I_R	Rated V_R, T_J = 25°C	-	-	100	μA
		Rated V_R, T_J = 100°C	-	-	10	mA

Notes:

1. The data tested by surface mounted on 10 mm x 20 mm x 0.1 mm copper pad area
2. The data tested by pulsed, pulse width ≤ 300μs, duty cycle ≤ 1%
3. The data tested by pulsed, pulse width ≤ 40ms

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

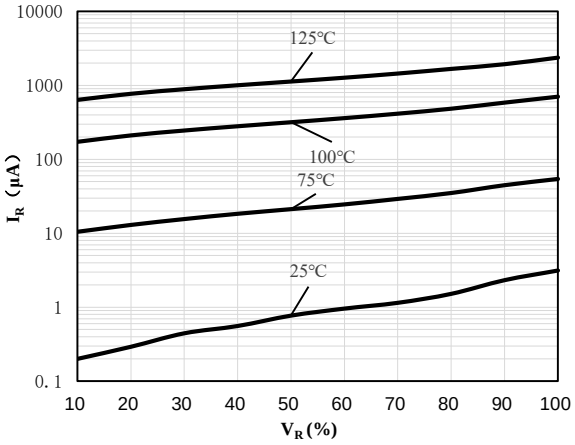


Fig 1 Typical Reverse Characteristic

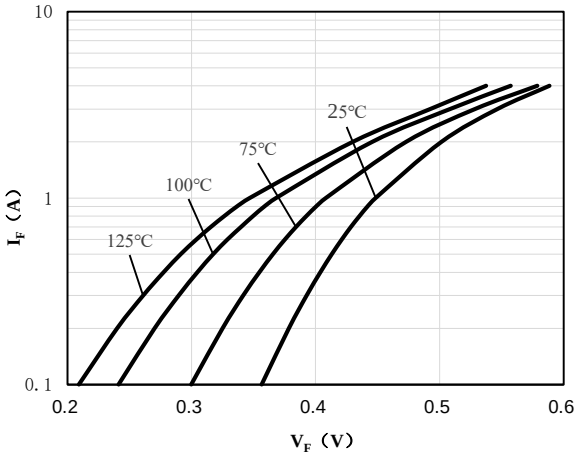


Fig 2 Typical Forward Characteristics

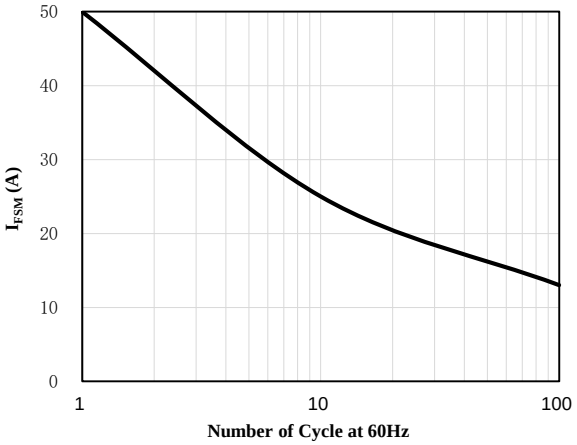


Fig 3 Surge Current Derating Curve

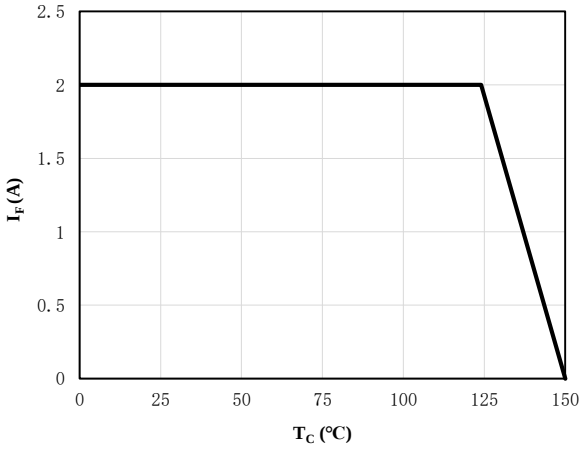
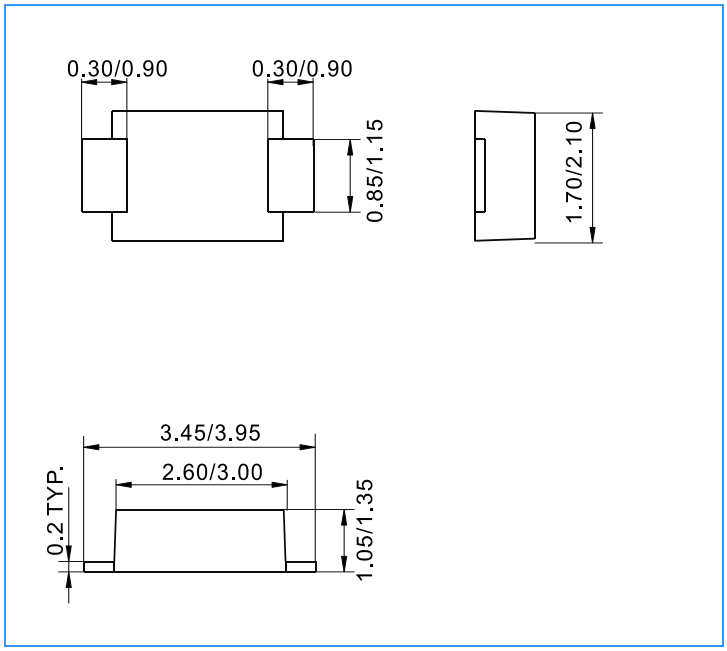


Fig 4 Forward Current Derating Curve

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)