

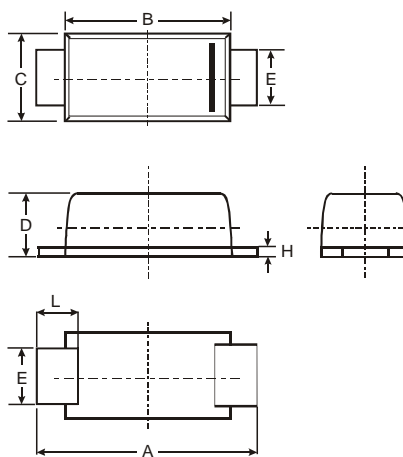
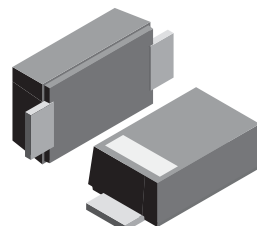
**VOLTAGE RANGE: 40V**  
**CURRENT: 0.5 A**

### Features

- Very Low profile 1.1mm Max
- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Capability
- Low Thermal Resistance
- Packaged in 8mm Tape and Reel

### Mechanical Data

- Case: SOD-123FL  
plastic body over passivated junction
- Terminals : Plated axial leads,  
solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight: 0.0007 ounce, 0.02 grams



SOD-123FL			
Dim	Min	Max	Typ
A	3.58	3.72	3.65
B	2.72	2.78	2.75
C	1.77	1.83	1.80
D	1.02	1.08	1.05
E	0.097	1.03	1.00
H	0.13	0.17	0.15
L	0.53	0.57	0.55
All Dimensions in mm			

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

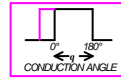
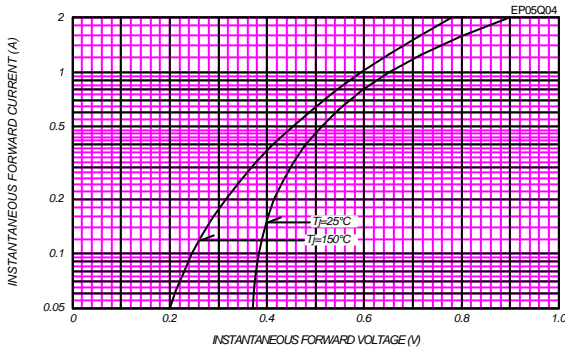
Characteristic	Symbol	Limits	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Average Rectified Output Current 50Hz Half Sine Wave Resistive Load	$I_O$	0.43 0.50	A
R.M.S. Forward Current	$I_{F(RMS)}$	0.785	A
Surge Forward Current 50Hz Half Sine Wave, 1 cycle, Non-repetitive	$I_{FSM}$	8	A
Operating Junction Temperature Range	$T_{jw}$	$-40 \sim +150$	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	$-40 \sim +150$	$^\circ\text{C}$

### Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

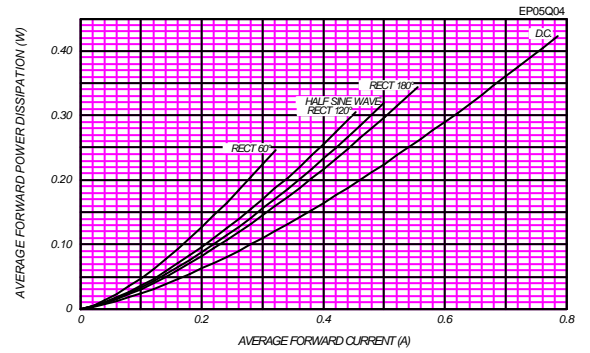
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Peak Reverse Current $T_j = 25^\circ\text{C}$ , $V_{RM} = V_{RRM}$	$I_{RM}$	—	—	100	$\mu\text{A}$
Peak Forward Voltage $T_j = 25^\circ\text{C}$ , $I_{FM} = 0.5\text{A}$	$V_{FM}$	—	—	0.51	V
Thermal Resistance	Junction to Lead	$R_{th(j-l)}$	—	70	$^\circ\text{C}/\text{W}$
	Junction to Ambient *	$R_{th(j-a)}$	—	300	$^\circ\text{C}/\text{W}$

\*1: Glass Epoxy Substrate Mounted (Soldering Lands=1x1mm, Both Sides)  
(TI: Lead Temperature)

FORWARD CURRENT VS. VOLTAGE

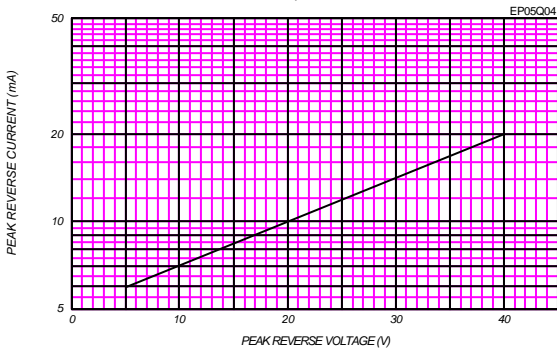


AVERAGE FORWARD POWER DISSIPATION

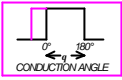
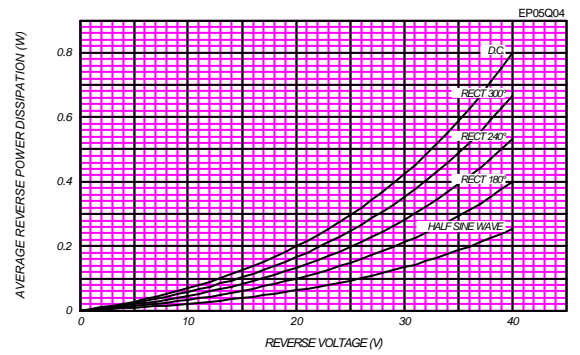


PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

$T_j = 150^\circ\text{C}$

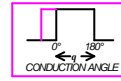
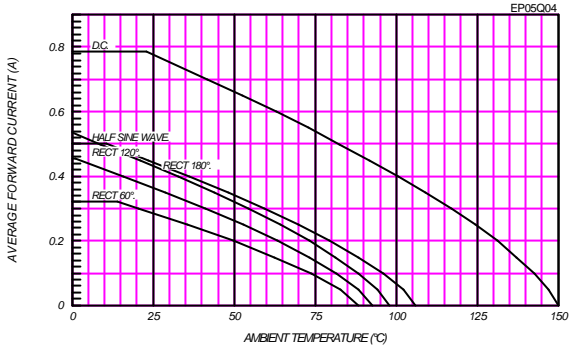


AVERAGE REVERSE POWER DISSIPATION



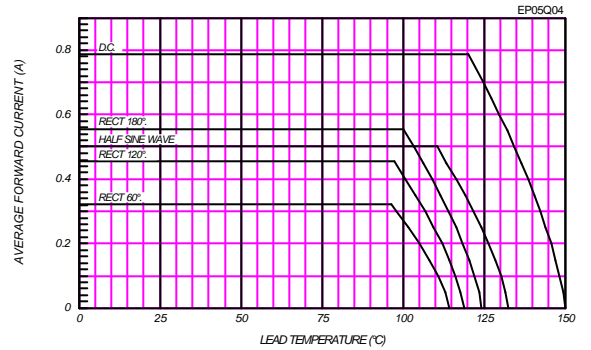
AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Glass-Epoxy Substrate Mounted (Soldering Land=1x1mm),  $V_{RM}=40\text{V}$



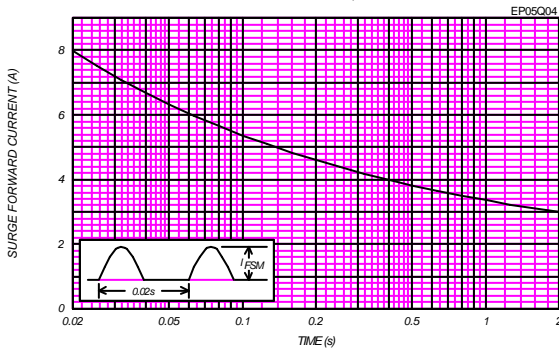
AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE

$V_{RM}=40\text{V}$



SURGE CURRENT RATINGS

$f=50\text{Hz}$ , Half Sine Wave, Non-Repetitive, No Load



JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

$T_j=25^\circ\text{C}$ ,  $V_m=20\text{mV}_{RMS}$ ,  $f=100\text{kHz}$ , Typical Value

