

### SOT-23

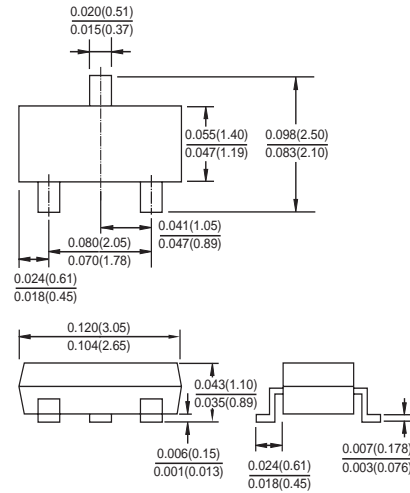


### Features

- ◇ Low turn-on voltage
- ◇ Fast switching
- ◇ PN junction guard Ring for transient

### Mechanical Data

- ◇ Case: SOT-23, Molded plastic
- ◇ Weight: 0.008 grams



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

Type Number	Symbol	BAS70	Units
Peak Repetitive Reverse Voltage	VRRM	70	V
Working Peak Reverse Voltage	VRWM		
DC Blocking Voltage	VR		
RMS Reverse Voltage	VR(RMS)	49	V
Forward Continuous Current (Note 1)	IF	70	mA
Non-Repetitive Peak Forward Surge Current @ $t \leq 1.0\text{s}$	IFSM	100	mA
Power Dissipation (Note 1)	Pd	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	K/W
Operating Junction Temperature Range	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150	$^\circ\text{C}$

### Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Reverse Breakdown Voltage (Note 2), $I_R=10\mu\text{A}$	V(BR)	70		
Reverse Leakage Current $t_p<300\mu\text{s}$ , $V_R=50\text{V}$	$I_R$	-	100	nA
Forward Voltage Drop $t_p=300\mu\text{s}$ , $I_F=1.0\text{mA}$ $t_p<300\mu\text{s}$ , $I_F=15\text{mA}$	V <sub>F</sub>	-	410 1000	mV
Junction Capacitance $V_R=0$ , $f=1.0\text{MHz}$	C <sub>j</sub>	-	2.0	pF
Reverse Recovery Time (Note 3)	trr	-	5.0	nS

- Notes:
1. Valid Provided that Terminals are Kept at Ambient Temperature.
  2. Test Period < 3000 $\mu\text{s}$ .
  3. Reverse Recovery Test Conditions:  $I_F=I_R=10\text{mA}$ ,  $I_{rr}=1.0\text{mA}$ ,  $R_L=100\Omega$ .

## RATINGS AND CHARACTERISTIC CURVES (BAS70 / -04 / -05 / -06)

FIG.1- POWER DERATING CURVE

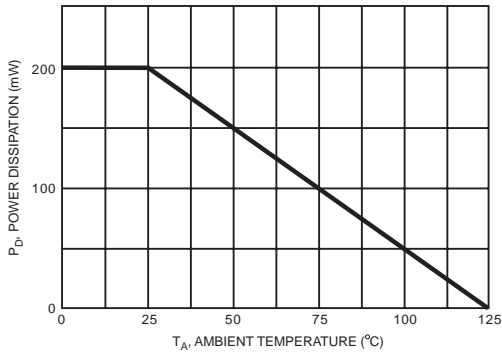


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

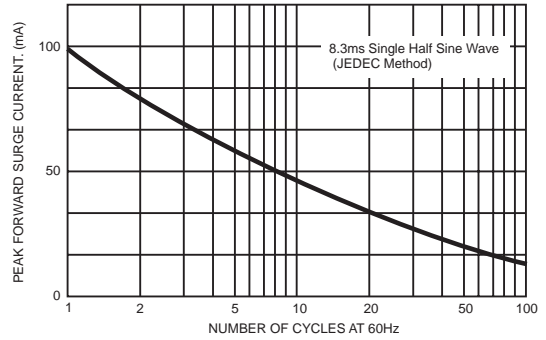


FIG.3- TYPICAL FORWARD CHARACTERISTICS

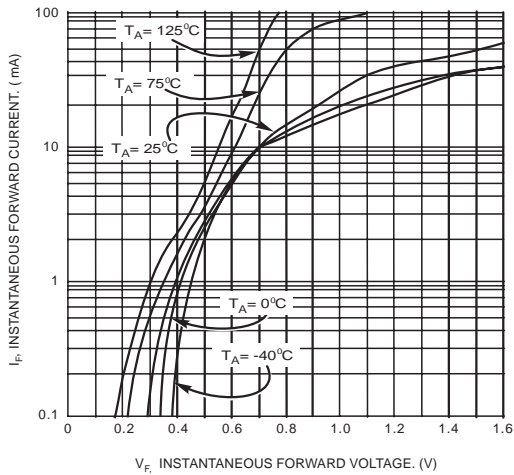


FIG.4- TYPICAL REVERSE CHARACTERISTICS

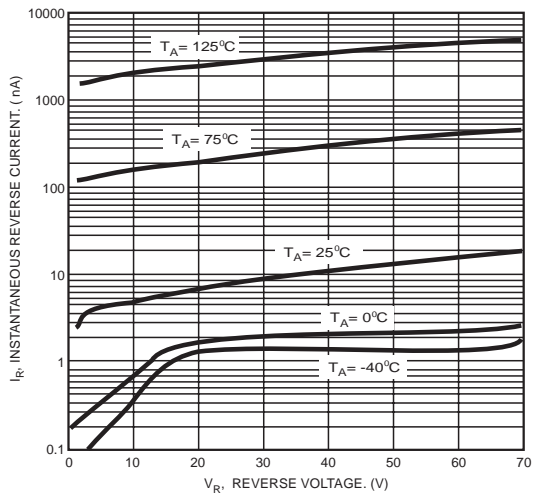


FIG.5- TYPICAL TOTAL CAPACITANCE VS REVERSE VOLTAGE

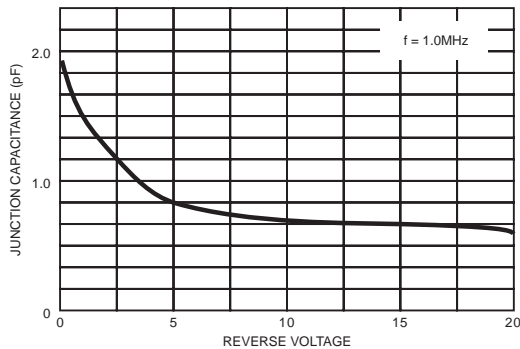


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

