

Schottky Barrier Diode

Features

1. High reliability
2. Very low forward voltage
3. Integrated protection ring against static discharge

Applications

Applications where a very low forward voltage is required

Absolute Maximum Ratings

$T_j=25^{\circ}\text{C}$

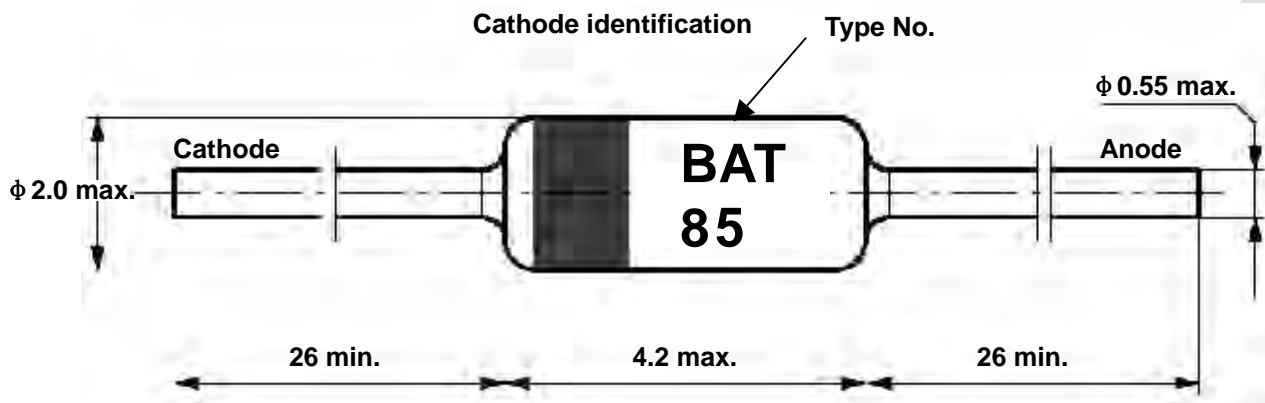
Parameter	Test Conditions	Symbol	Value	Unit
Continuous reverse voltage		V_R	30	V
Forward continuous current	$T_{amb}=25^{\circ}\text{C}$	I_F	200	mA
Peak forward current	$T_{amb}=25^{\circ}\text{C}$	I_{FM}	300	mA
Surge forward current	$t_p \leq 1 \text{ s}, T_{amb}=25^{\circ}\text{C}$	I_{FSM}	600	mA
Power dissipation	$T_{amb}=65^{\circ}\text{C}$	P_{tot}	200	mW
Maximum junction temperature		T_j	125	$^{\circ}\text{C}$
Ambient operating temperature range		T_A	-65~+125	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-65~+150	$^{\circ}\text{C}$

Maximum Thermal Resistance

$T_j=25^{\circ}\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mm×50mm×1.6mm	R_{thJA}	250	K/W

Dimensions in mm



Standard Glass Case
JEDEC DO 35

Characteristics ($T_j=25^\circ\text{C}$ unless otherwise specified)

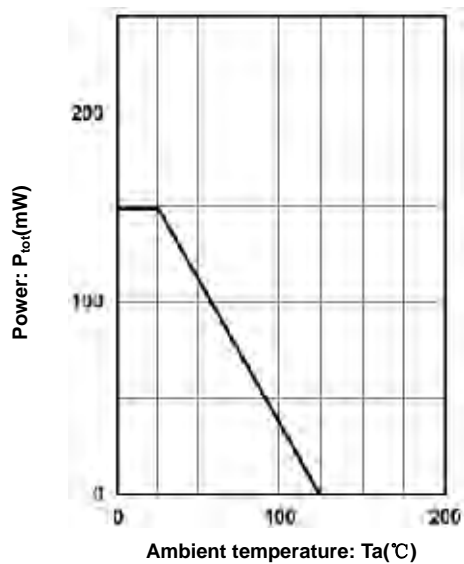


Figure 1. Admissible power dissipation vs. ambient temperature

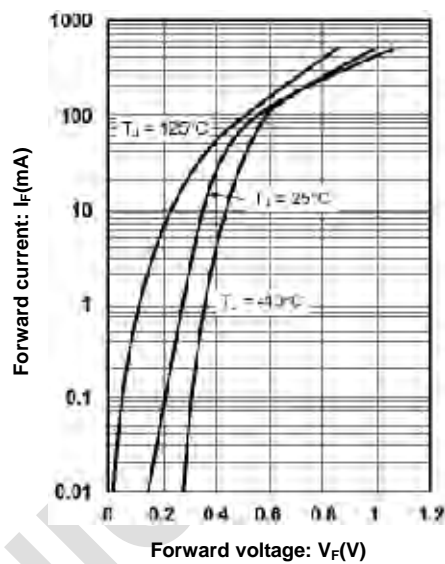


Figure 2. Typical instantaneous forward characteristics

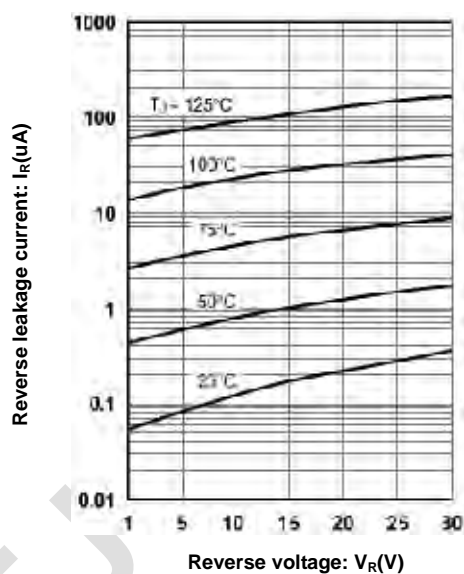


Figure 3. Typical reverse characteristics

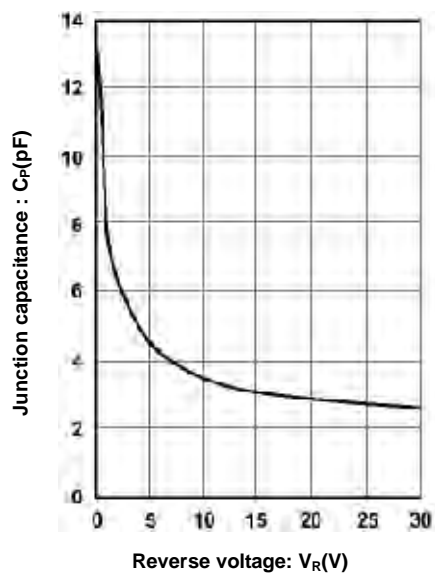


Figure 4. Typical junction capacitance

Electrical Characteristics

$T_j=25^{\circ}\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)R}$	$I_R=10\ \mu\text{A}$ (pulsed)	30	-	-	V
Leakage current	I_R	$V_R=25\text{V}$	-	-	2	μA
Forward voltage Pulse test $t_p < 300\ \mu\text{s}$, $\delta < 2\%$	V_F	$I_F=0.1\text{mA}$	-	-	0.24	V
		$I_F=1\text{mA}$	-	-	0.32	V
		$I_F=10\text{mA}$	-	-	0.4	V
		$I_F=30\text{mA}$	-	0.5	-	V
		$I_F=100\text{mA}$	-	-	0.8	V
Capacitance	C_{tot}	$V_R=1\text{V}$, $f=1\text{MHz}$	-	-	10	pF
Reverse recovery time	t_{rr}	$I_F=10\text{mA}$ to $I_R=10\text{mA}$ to $I_R=0.1\text{mA}$ I_R	-	-	5	ns