

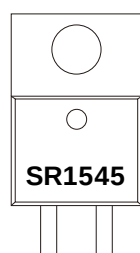
TO-220A Plastic-Encapsulate Diodes

SCHOTTKY BARRIER RECTIFIER

FEATURES

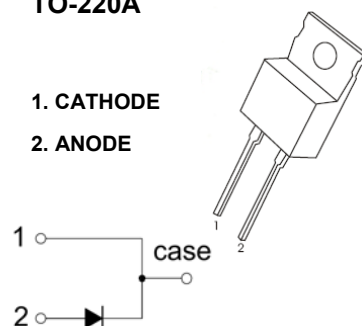
- Low Power Loss, High Efficiency
- Guard Ring Die Construction for Transient Protection
- High Current Capability and Low Forward Voltage Drop

MARKING



TO-220A

1. CATHODE
2. ANODE



MAIN CHARACTERISTICS

I_O	15A
V_{RRM}	45V
T_j	150°C
$V_{F(typ)}$	0.54V (@ $T_j=125^\circ\text{C}$)

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{RRM}	Peak repetitive reverse voltage	100	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	70	V
I_O	Average rectified output current	15	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	280	A
$R_{\theta JC}$	Thermal resistance from junction to case	2	°C/W
$R_{\theta JA}$	Thermal resistance from junction to ambient	85	°C/W
T_j	Junction temperature	150	°C
T_{stg}	Storage temperature	-55~+150	°C

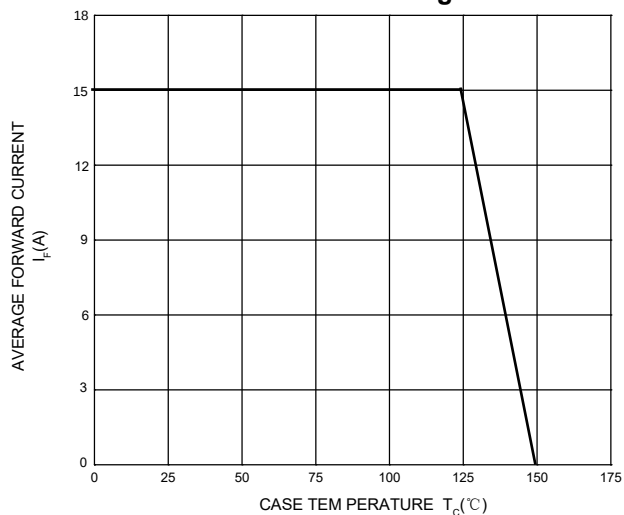
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1\text{mA}$	100			V
Reverse current	I_R	$V_R=100\text{V}$	$T_j=25^\circ\text{C}$		50	uA
			$T_j=125^\circ\text{C}$		2000	uA
Forward voltage	V_F	$I_F=15\text{A}$	$T_j=25^\circ\text{C}$		0.60	V
			$T_j=125^\circ\text{C}$	0.54		V

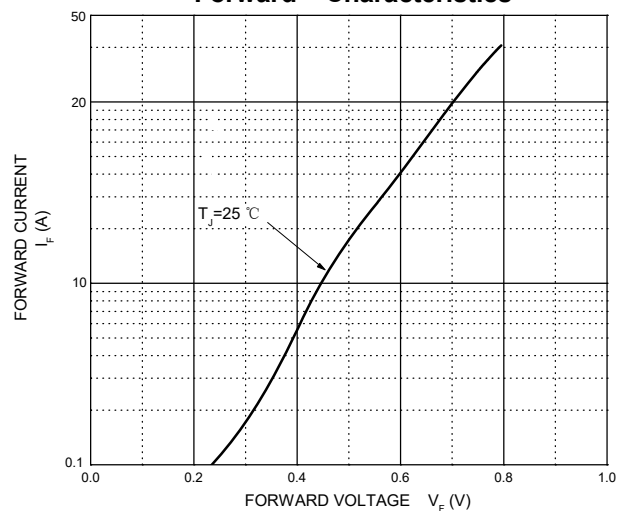
*Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycles $\leq 2.0\%$.

Typical Characteristics

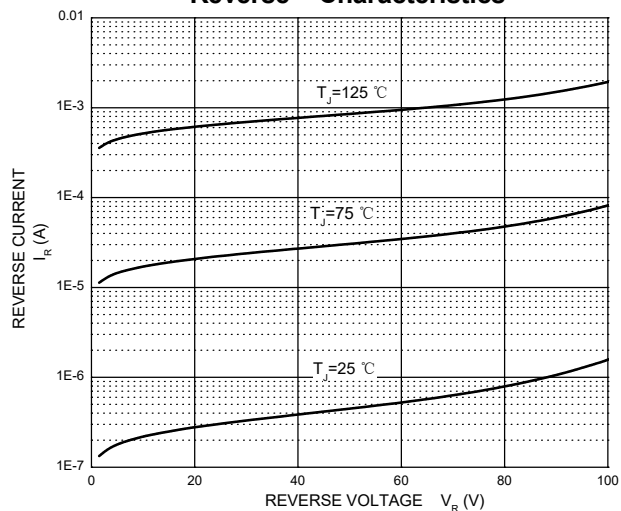
Forward Current Derating Curve



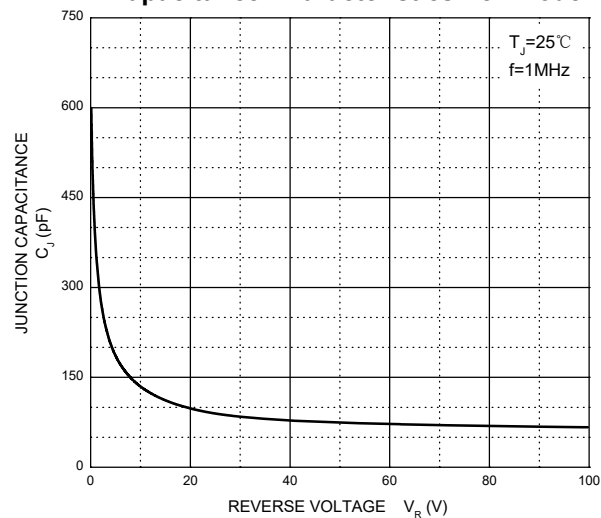
Forward Characteristics



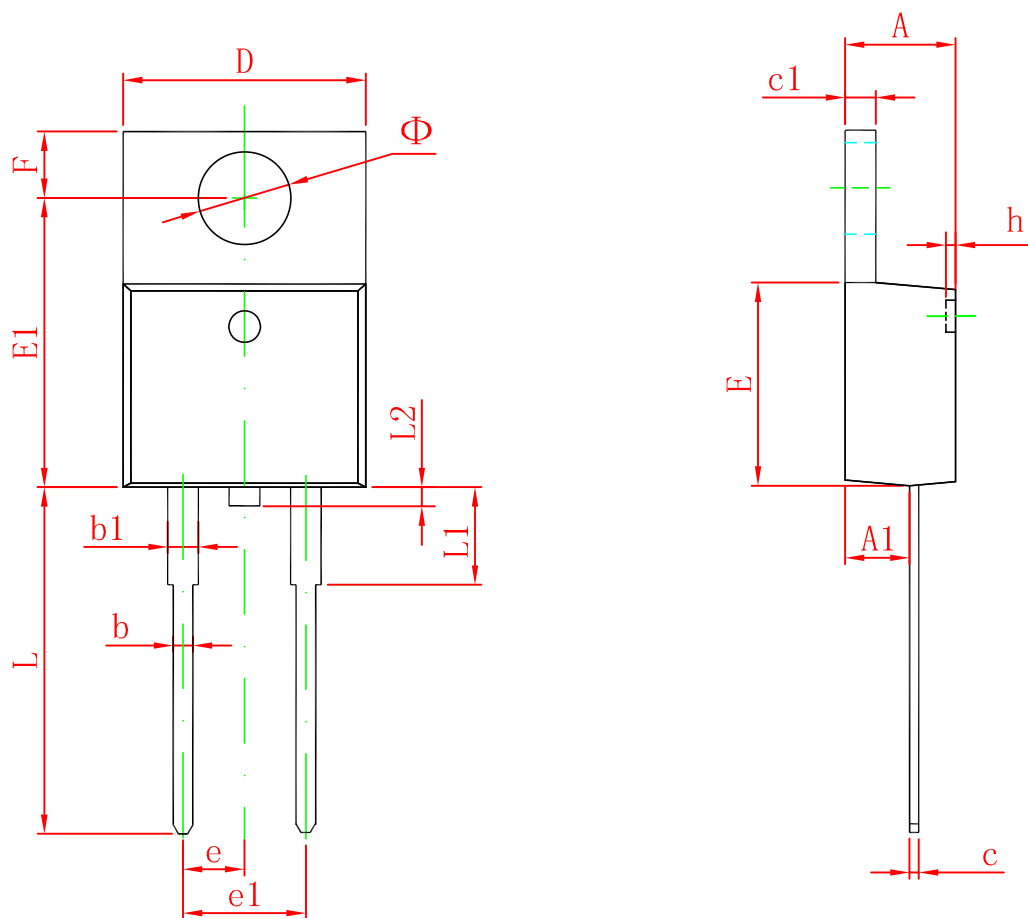
Reverse Characteristics



Capacitance Characteristics Per Diode



TO-220A Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.470	4.670	0.176	0.184
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.310	0.530	0.012	0.021
c1	1.170	1.370	0.046	0.054
D	10.010	10.310	0.394	0.406
E	8.500	8.900	0.335	0.350
E1	12.060	12.460	0.475	0.491
e	2.540 TYP		0.100 TYP	
e1	4.980	5.180	0.196	0.204
F	2.590	2.890	0.102	0.114
h	0.000	0.300	0.000	0.012
L	13.400	13.800	0.528	0.543
L1	3.560	3.960	0.140	0.156
L2		1.000		0.039
Φ	3.735	3.935	0.147	0.155