

Ultrafast Soft Recovery Diode

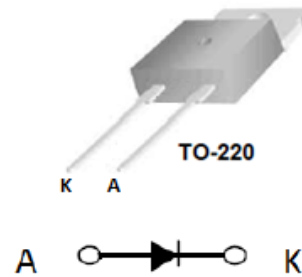
8A 400V $t_{rr} \sim 21$ ns

Features

Ultrafast Recovery
 175°C operating junction temperature
 Designed and qualified for industrial level

Benefits

Reduced RFI and EMI
 Higher frequency operation
 Reduced snubbing
 Reduced part count



Description/Applications

These diodes are optimized to reduce losses and EMI/RFI in high frequency power conditioning system. The softness of the recovery eliminates the need for a snubber in most applications. These devices are ideally suited for HF welding power converters and other applications where switching losses are not significant portion of the total losses.

Absolute Maximum Ratings $T_c = 25$ °C unless otherwise noted

Symbol	Parameter	Test Condition	Values	Units
V_R	Cathode – Anode voltage	--	400	V
$I_{F(AV)}$	Continuous forward current	$T_c = 25$ °C	8	A
I_{FSM}	Single pulse forward current	$T_c = 25$ °C	80	A
T_j, T_{STG}	Operating and Storage Temperature Range	--	-55 to +175	°C

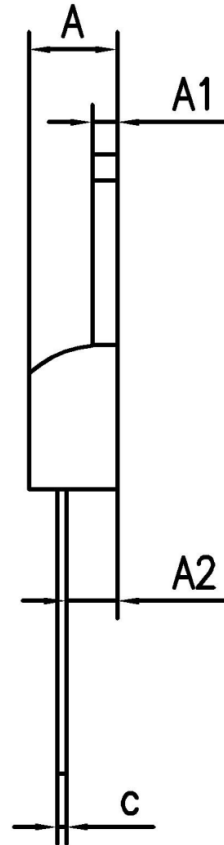
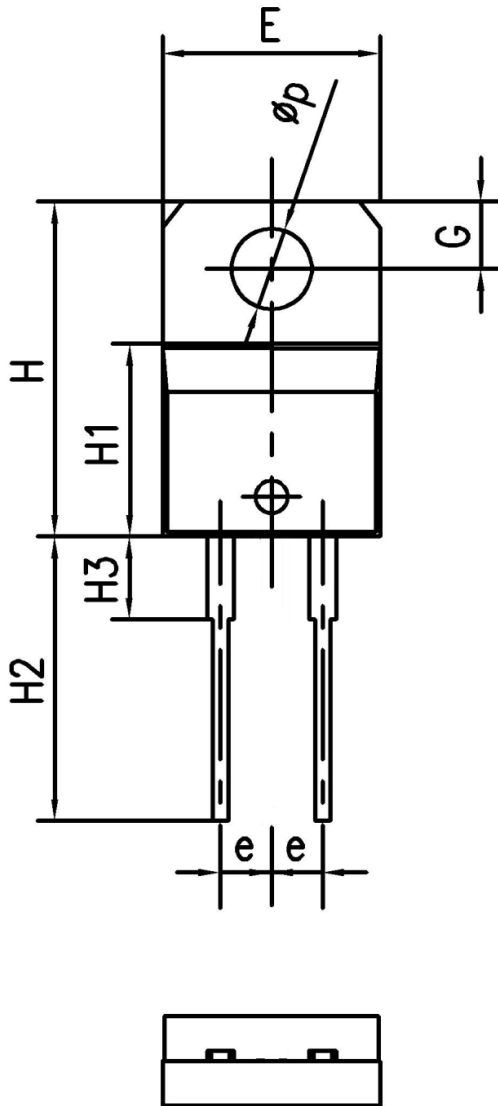
Thermal characteristics

Symbol	Parameter	Values	Units
$R_{\theta JC}$	Thermal Resistance, Junction-to-Case	2.6	°C/W

Electrical Characteristics $T_j = 25$ °C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
V_{BR}, V_R	Breakdown Voltage, Blocking Voltage	$I_R = 100$ uA	400	--	--	V
V_F	Forward voltage	$I_F = 1$ A, $T_j = 25$ °C	--	1.15	1.3	V
		$I_F = 8$ A, $T_j = 125$ °C	--	1.0	1.2	V
I_R	Reverse Leakage Current	$V_R = V_R$ rated	--	--	2	uA
		$V_R = V_R$ rated, $T_j = 120$ °C	--	2	--	uA
t_{rr}	Reverse recovery time	$I_F = 0.5$ A, $I_R = 1$ A, $I_{RR} = 0.25$ A	--	21	30	ns
		$I_F = 1$ A, $V_R = 30$ V, $di/dt = -200$ A/us	--	21	--	ns

Package Information



	单位 mm		
	MIN	NOM	MAX
A	4.05	4.25	4.45
A1	1.15	1.25	1.35
A2	2.35	2.55	2.75
b	0.7	0.8	0.9
b1	1.22	1.32	1.42
c	0.4	0.45	0.5
e	2.34	2.54	2.74
E	9.95	10.15	10.35
H	15.3	15.5	15.7
H1	8.8	9	9.2
H2	13	13.5	14
H3	3.8	4	4.2
G	2.6	2.8	3
P	3.7	3.8	3.9