

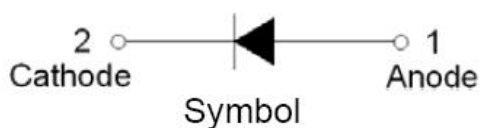
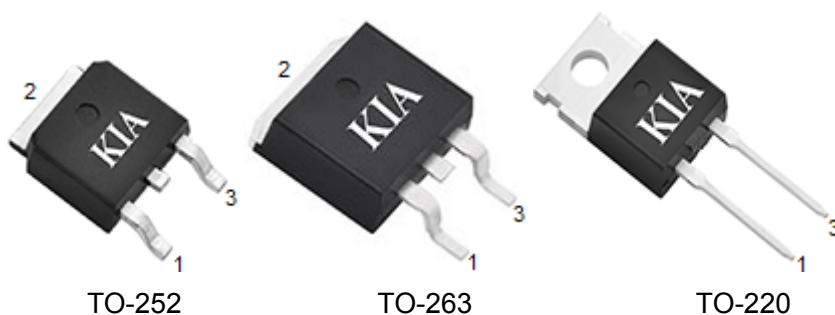
1. Description

- Plastic package has underwriters laboratory flammability classification 94V-0
- Lead free in comply with EU RoHS 2011/65/EU directives
- Low reverse leakage current
- Fast recovery time and soft recovery characteristics
- Low recovery loss
- Applications for discontinuous current mode (DCM) power factor correction (PFC), High frequency switched-mode power supplies, and TV power supplies

2. Mechanical Characteristics

- Case: epoxy, molded
- Terminals: Solder plated, solderable per J-STD-002

3. Pin configuration



Pin		Function
TO-220	TO-252/TO-263	
1	1	Cathode
--	2	Cathode
3	3	Anode

4. Ordering Information

Part Number	Package	Brand
KIA08TB80DD	TO-252	KIA
KIA08TB80DB	TO-263	KIA
KIA08TB80DP	TO-220-2L	KIA

5. Thermal characteristics

Parameter	Symbol	Rating	Unit
Maximum thermal resistance, junction-to-case	$R_{\theta JC}$	2.0	°C/W

6. Maximum ratings

(Rating at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Rating	Units
Maximum repetitive peak reverse voltage	V_{RRM}	800	V
Maximum RMS voltage	V_{RMS}	560	V
Maximum DC blocking voltage	V_{DC}	800	V
Average forward current at TC=100°C	$I_{F(AV)}$	8	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	125	A
Junction temperature and storage temperature range	T_J, T_{stg}	-55 to +150	°C

7. Electrical characteristics

(Rating at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Conditions	Rating			Unit
			Min	Typ	Max	
Forward Voltage	V_F	$I_F=8A$	-	-	1.7	V
					1.5	V
DC reverse current at rated DC blocking voltage	I_R	$T_J=25^{\circ}C$	-	-	5	μA
		$T_J=150^{\circ}C$	-	-	200	μA
Reverse Recovery Time	t_{rr}	$I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$	-	-	75	ns

8. Characteristics curve

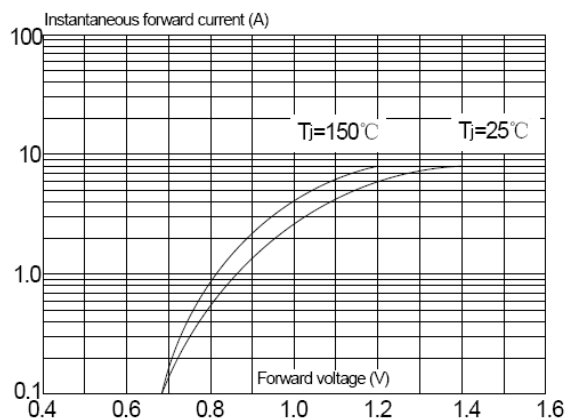


FIG.1: Typical forward characteristics

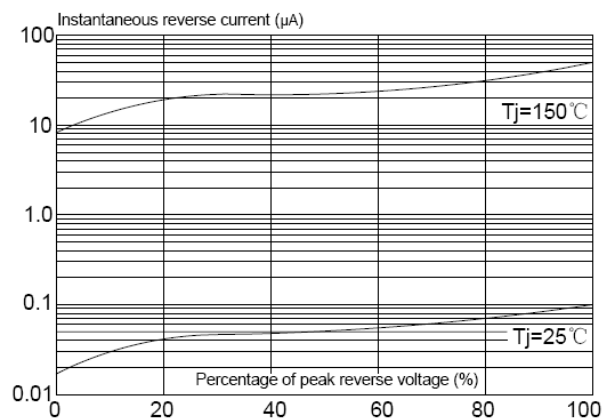


FIG.2: Typical reverse characteristics

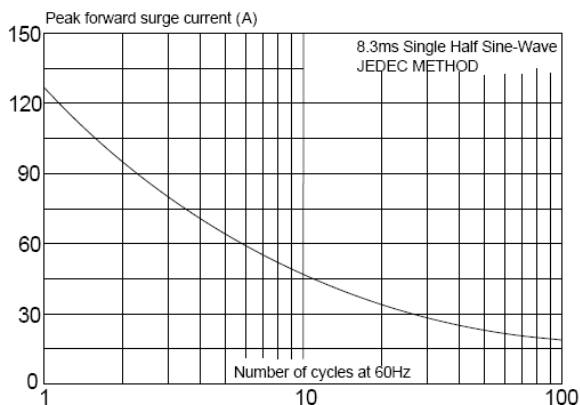


FIG.3: Maximum non-repetitive peak forward surge current(8.3ms single half sine-wave)

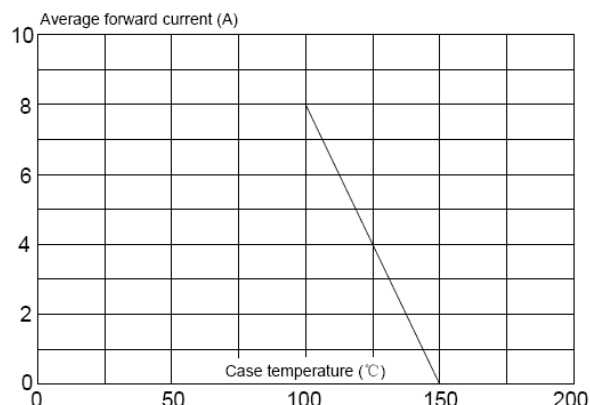


FIG.4: Forward current derating curve