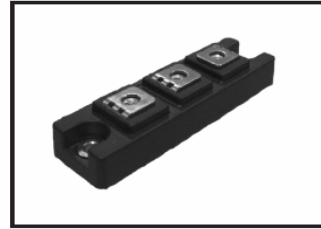


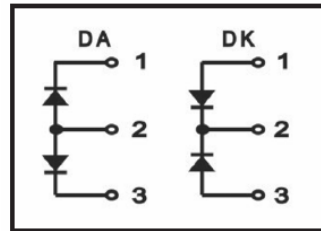
PRODUCT FEATURES

- Ultrafast Reverse Recovery Time
- Soft Reverse Recovery Characteristics
- Low Reverse Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Inductance Package



APPLICATIONS

- Inversion Welder
- Uninterruptible Power Supply (UPS)
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- Power Factor Correction (PFC) Circuit



ABSOLUTE MAXIMUM RATINGS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Max.	Unit
V_{RRM}	Repetitive Reverse Voltage		600	V
$I_{F(AV)}$	Average Forward Current	$T_C=75^{\circ}\text{C}$, Per Diode	150	A
		$T_C=75^{\circ}\text{C}$, Per Moudle	300	A
		$T_C=85^{\circ}\text{C}$, 20KHz, Per Moudle	200	A
$I_{F(RMS)}$	RMS Forward Current	$T_C=75^{\circ}\text{C}$, Per Diode	220	A
I_{FSM}	Non-Repetitive Surge	$T_J=45^{\circ}\text{C}$, $t=10\text{ms}$, 50Hz, Sine	1400	A
	Forward Current	$T_J=45^{\circ}\text{C}$, $t=8.3\text{ms}$, 60Hz, Sine	1500	A
I^2t	I^2t (For Fusing)	$T_J=45^{\circ}\text{C}$, $t=10\text{ms}$, 50Hz, Sine	9800	A^2s
		$T_J=45^{\circ}\text{C}$, $t=8.3\text{ms}$, 60Hz, Sine	11200	A^2s
P_D	Power Dissipation		280	W
T_J	Junction Temperature		-40 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$

ELECTRICAL AND THERMAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	$V_R=600\text{V}$	--	--	1	mA
		$V_R=600\text{V}$, $T_J=125^{\circ}\text{C}$	--	--	20	mA
V_F	Forward Voltage	$I_F=150\text{A}$	--	--	1.30	V
		$I_F=150\text{A}$, $T_J=125^{\circ}\text{C}$	--	--	1.15	V
t_{rr}	Reverse Recovery Time	$I_F=150\text{A}$, $T_J=100^{\circ}\text{C}$	--	200	--	ns
I_{RRM}	Max. Reverse Recovery Current	$V_R=300\text{V}$, $T_J=25^{\circ}\text{C}$	--	11	--	A
I_{RRM}	Max. Reverse Recovery Current	$di_F/dt=-200\text{A}/\mu\text{s}$, $T_J=100^{\circ}\text{C}$	--	22	--	A
$R_{\theta JC}$	Thermal Resistance	Junction-to-Case	--	--	0.44	$^{\circ}\text{C}/\text{W}$

Package outline on backside

MECHANICAL CHARACTERISTICS

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Torque	Module-to-Sink	Recommended (M5)	2.5	3.5	4.0	N · m
Torque	Module Electrodes	Recommended (M5)	2.5	3.5	4.0	N · m

MLP-17 Package Outline (Dimensions in mm)

