

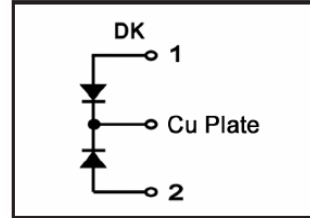
PRODUCT FEATURES

- Ultrafast Reverse Recovery Time
- Soft Reverse Recovery Characteristics
- Low Reverse Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Mechanical Stress 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_R	D.C. Reverse Voltage		600	V
V_{RRM}	Repetitive Reverse Voltage		600	V
$I_{F(AV)}$	Average Forward Current	$T_C=100^{\circ}\text{C}$, Per Diode	150	A
		$T_C=100^{\circ}\text{C}$, Per Moudle	300	A
		$T_C=100^{\circ}\text{C}$, 20KHz, Per Moudle	200	A
I_{FSM}	Non-Repetitive Surge	1/2 Cycle, 50Hz, Sine	1500	A
	Forward Current	1/2 Cycle, 60Hz, Sine	1800	A
I^2t	I^2t (For Fusing)	1/2 Cycle, 50Hz, Sine	11250	A^2s
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	$I_F=150\text{A}$	--	1.15	--	V
t_{rr}	Reverse Recovery Time	$I_F=1\text{A}$, $V_R=30\text{V}$ $di_F/dt=-200\text{A}/\mu\text{s}$	--	33	--	ns
t_{rr}	Reverse Recovery Time	$I_F=150\text{A}$, $di_F/dt=-200\text{A}/\mu\text{s}$ $V_R=300\text{V}$, $T_J=100^{\circ}\text{C}$	--	200	--	ns
$R_{\theta JC}$	Thermal Resistance	Junction-to-Case	--	--	0.20	$^{\circ}\text{C}/\text{W}$

Package outline on backside

MECHANICAL CHARACTERISTICS

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Torque	Module-to-Sink	Recommended (M6)	3.0	3.9	4.7	N · m
Torque	Module Electrodes	Recommended (M6)	3.0	3.9	4.7	N · m

MTT-17 Package Outline (Dimensions in mm)

