

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

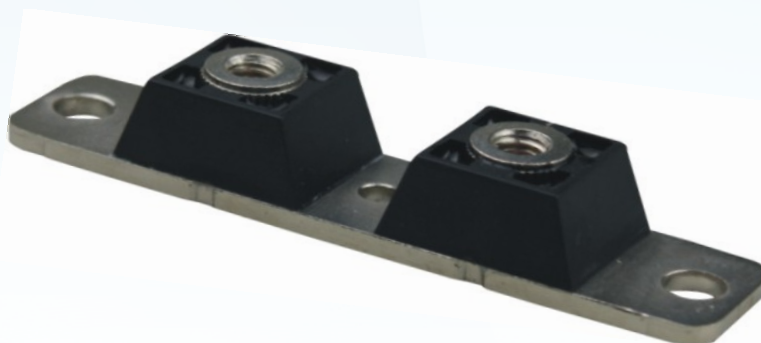
▶ Domestic	Part Number	MURP20040CT
▶ Overseas	Part Number	MURP20040CT
▶ Equivalent	Part Number	MURP20040CT

EV is the abbreviation of name EVVO

400V 200A Module

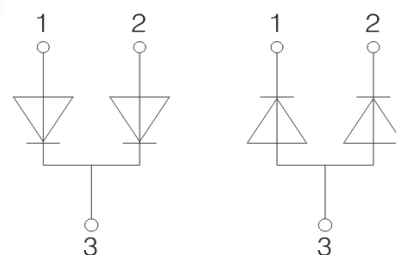
PRODUCT FEATURES

- 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	Values	Unit
V_R	Maximum D.C. Reverse Voltage		400	V
V_{RRM}	Maximum Repetitive Reverse Voltage		400	V
$I_{F(AV)}$	Average Forward Current	$T_c=100^{\circ}\text{C}$, Per Diode	100	A
		$T_c=100^{\circ}\text{C}$, Per Moudle	200	A
		$T_c=100^{\circ}\text{C}$, 20KHz, Per Moudle	140	A
$I_{F(RMS)}$	RMS Forward Current	$T_c=100^{\circ}\text{C}$, Per Diode	140	A
I_{FSM}	Non-Repetitive Surge Forward Current	1/2 Cycle , 50Hz, Sine	1350	A
		1/2 Cycle , 60Hz, Sine	1650	A
I^2t	I^2t (For Fusing)	$T_J=45^{\circ}\text{C}$, $t=10\text{ms}$, 50Hz, Sine	9112	A^2s
		$T_J=45^{\circ}\text{C}$, $t=8.3\text{ms}$, 60Hz, Sine	13612	A^2s
P_D	Power Dissipation		595	W
T_J	Junction Temperature		-40 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$
Torque	Module-to-Sink	Recommended (M6)	3~4.7	N·m
Torque	Module Electrodes	Recommended (M6)	3~4.7	N·m
$R_{\theta JC}$	Thermal Resistance	Junction-to-Case	0.21	$^{\circ}\text{C}/\text{W}$
Weight			70	g

ELECTRICAL CHARACTERISTICS

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	$V_R=400\text{V}$	--	--	0.5	mA
		$V_R=400\text{V}, T_J=125^{\circ}\text{C}$	--	--	1	mA
V_F	Forward Voltage	$I_F=100\text{A}$	--	1.10	--	V
		$I_F=100\text{A}, T_J=125^{\circ}\text{C}$	--	1.00	--	V
t_{rr}	Reverse Recovery Time	$I_F=1\text{A}, V_R=30\text{V}, di_F/dt=-200\text{A}/\mu\text{s}$	--	35	--	ns
t_{rr}	Reverse Recovery Time	$V_R=200\text{V}, I_F=100\text{A}$ $di_F/dt=-200\text{A}/\mu\text{s}, T_J=25^{\circ}\text{C}$	--	85	--	ns
I_{RRM}	Max. Reverse Recovery Current		--	8	--	A
t_{rr}	Reverse Recovery Time	$V_R=200\text{V}, I_F=100\text{A}$ $di_F/dt=-200\text{A}/\mu\text{s}, T_J=125^{\circ}\text{C}$	--	135	--	ns
I_{RRM}	Max. Reverse Recovery Current		--	13.5	--	A

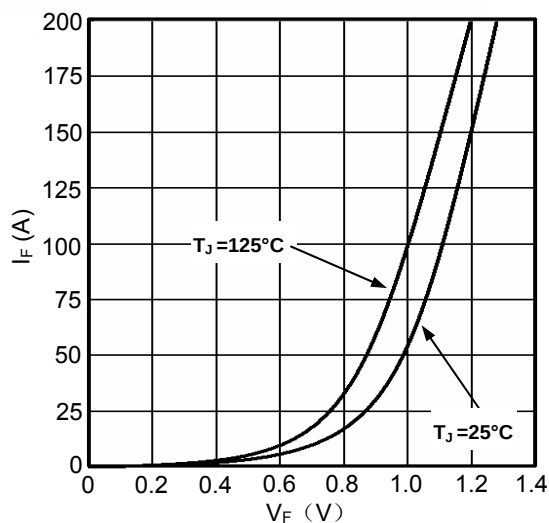
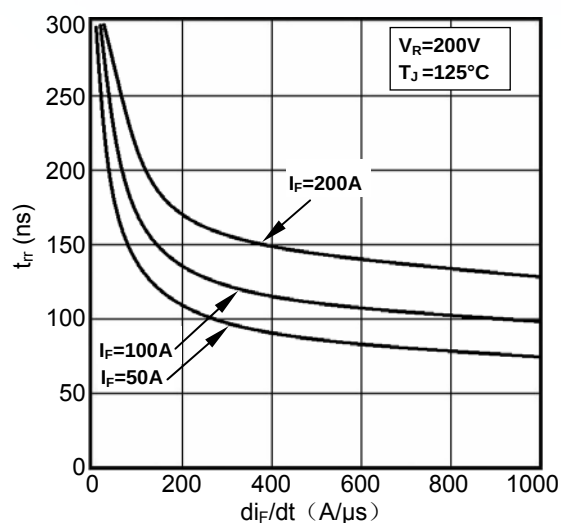
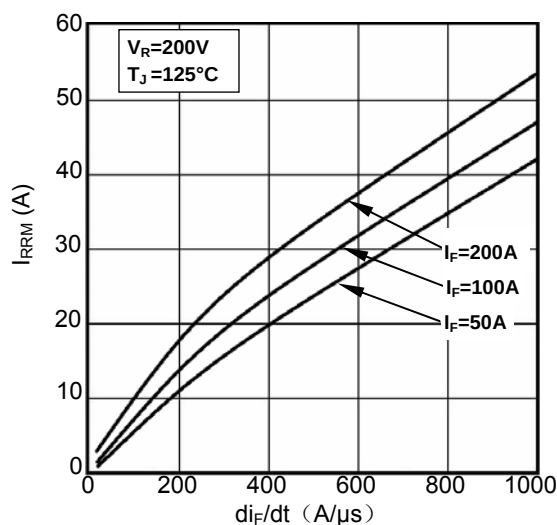
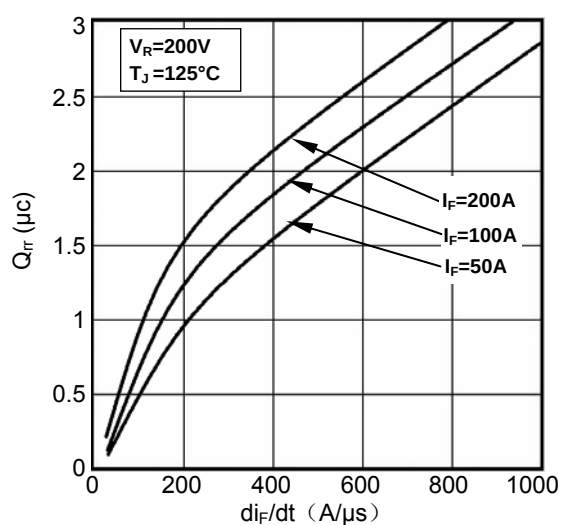


Figure1. Forward Voltage Drop vs Forward Current

Figure2. Reverse Recovery Time vs di_F/dt Figure3. Reverse Recovery Current vs di_F/dt Figure4. Reverse Recovery Charge vs di_F/dt

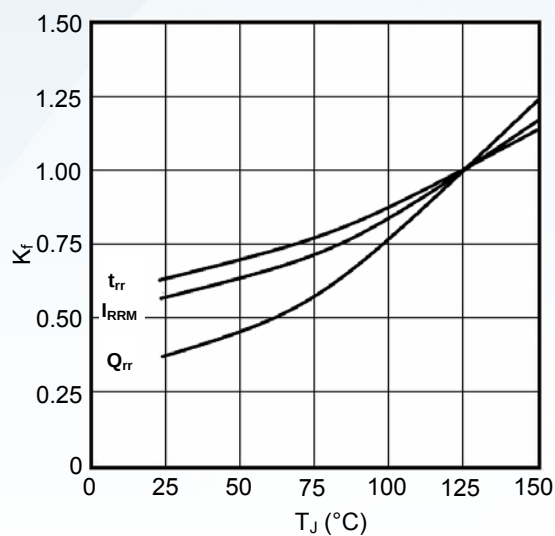


Figure5. Dynamic Parameters vs Junction Temperature

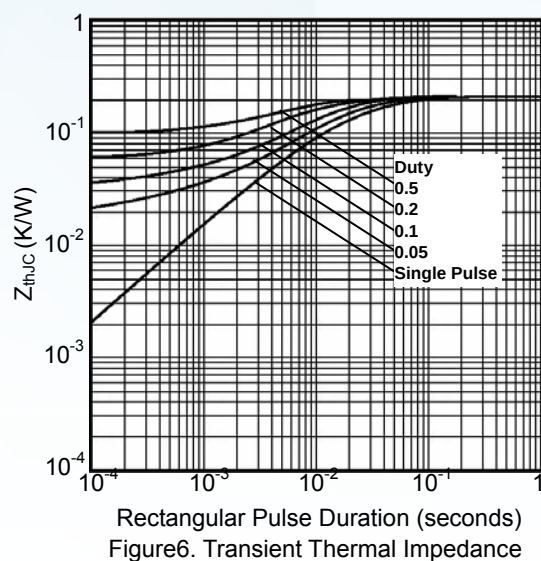
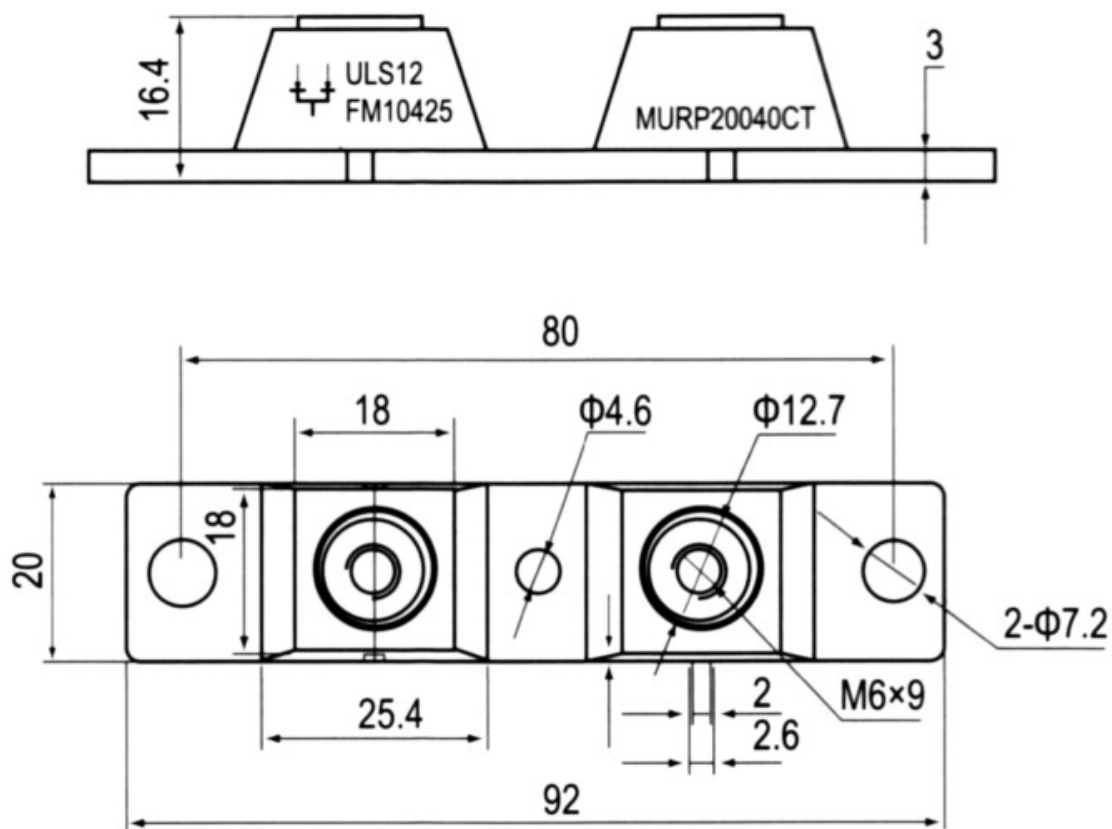


Figure6. Transient Thermal Impedance


 Dimensions (mm)
 Figure7. Package Outline

Disclaimer

EVVOSEMI ("EVVO") reserves the right to make corrections, enhancements, improvements, and other changes to its products and services at any time, and to discontinue any product or service without notice.

EVVO warrants the performance of its hardware products to the specifications applicable at the time of sale in accordance with its standard warranty. Testing and other quality control techniques are used as deemed necessary by EVVO to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

Customers should obtain and confirm the latest product information and specifications before final design, purchase, or use. EVVO makes no warranty, representation, or guarantee regarding the suitability of its products for any particular purpose, nor does EVVO assume any liability for application assistance or customer product design. EVVO does not warrant or accept any liability for products that are purchased or used for any unintended or unauthorized application.

EVVO products are not authorized for use as critical components in life support devices or systems without the express written approval of EVVOSEMI.

The EVVO logo and EVVOSEMI are trademarks of EVVOSEMI or its subsidiaries in relevant jurisdictions. EVVO reserves the right to make changes without further notice to any products herein.