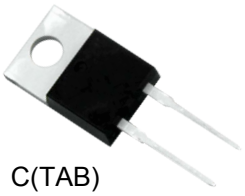
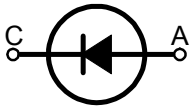
MUR1520

Ultra Fast Recovery Diodes



C(TAB)

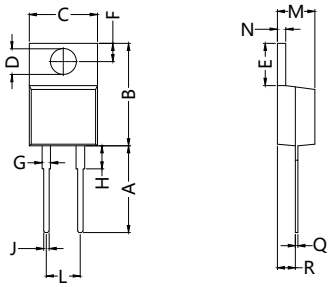


A

C

A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-220AC



Dim.	Millimeter	
	Min.	Max.
A	12.70	13.97
B	14.73	16.00
C	9.91	10.66
ØD	3.54	4.08
E	5.85	6.85
F	2.54	3.18
G	1.15	1.65
H	2.79	5.84
J	0.64	1.01
L	5.05BSC	
M	4.32	4.82
N	1.14	1.39
Q	0.35	0.56
R	2.29	2.79

	V_{RSM} V	V_{RRM} V
MUR1520	200	200

Symbol	Test Conditions		Maximum Ratings	Unit
I_{FRMS} I_{FAVM} I_{FRM}	$T_{VJ}=T_{VJM}$ $T_C=100^oC$; rectangular, d=0.5 t_P<10us; rep. rating, pulse width limited by T_{VJM}		25 15 150	A
I_{FSM}	$T_{VJ}=45^oC$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	150 160	A
	$T_{VJ}=150^oC$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	95 105	
I^2t	$T_{VJ}=45^oC$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	50 50	A^2s
	$T_{VJ}=150^oC$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	36 37	
T_{VJ} T_{VJM} T_{stg}			-40...+150 150 -40...+150	^oC
P_{tot}	$T_C=25^oC$		62	W
M_d	Mounting torque		0.4...0.6	Nm
Weight			2	g

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Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	T_{VJ}=25°C; V_R=V_{RRM} T_{VJ}=25°C; V_R=0.8·V_{RRM} T_{VJ}=125°C; V_R=0.8·V_{RRM}		10 10 1	uA uA mA
V_F	I_F=15A; T_{VJ}=150°C T_{VJ}=25°C		1.0 1.2	V
V_{FO}	For power-loss calculations only		1.12	V
r_F	T_{VJ}=T_{VJM}		23.2	mΩ
R_{thJC} R_{thCK} R_{thJA}		0.5	2 60	K/W
t_{rr}	I_F=1A; -di/dt=50A/us; V_R=30V; T_{VJ}=25°C	35	50	ns
I_{RM}	V_R=350V; I_F=15A; -di$_F$/dt=100A/us; L≤0.05uH; T_{VJ}=100°C	4	4.4	A

FEATURES

* International standard package TO-220AC
* Glass passivated chips
* Very short recovery time
* Extremely low switching losses
* Low I_{RM}-values
* Soft recovery behaviour
* RoHS compliant

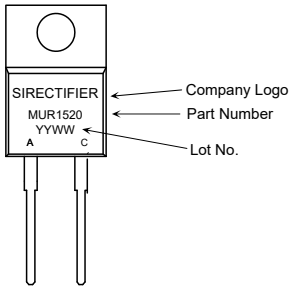
APPLICATIONS

* Antiparallel diode for high frequency switching devices
* Antisaturation diode
* Snubber diode
* Free wheeling diode in converters and motor control circuits
* Rectifiers in switch mode power supplies (SMPS)
* Inductive heating and melting
* Uninterruptible power supplies (UPS)
* Ultrasonic cleaners and welders

ADVANTAGES

* High reliability circuit operation
* Low voltage peaks for reduced protection circuits
* Low noise switching
* Low losses
* Operating at lower temperature or space saving by reduced cooling

Marking



Ordering Information

Part Number	Package	Shipping	Marking Code
MUR1520	TO-220AC	50pcs / Tube	MUR1520

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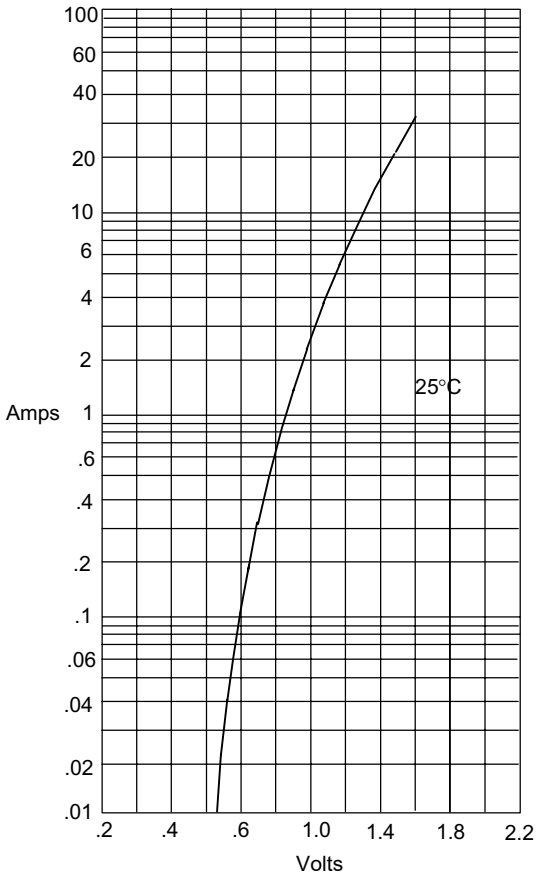
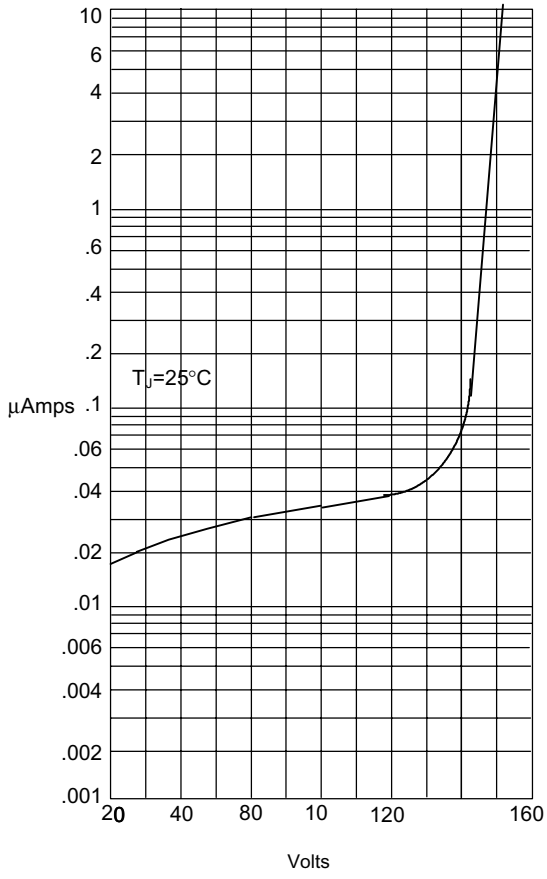


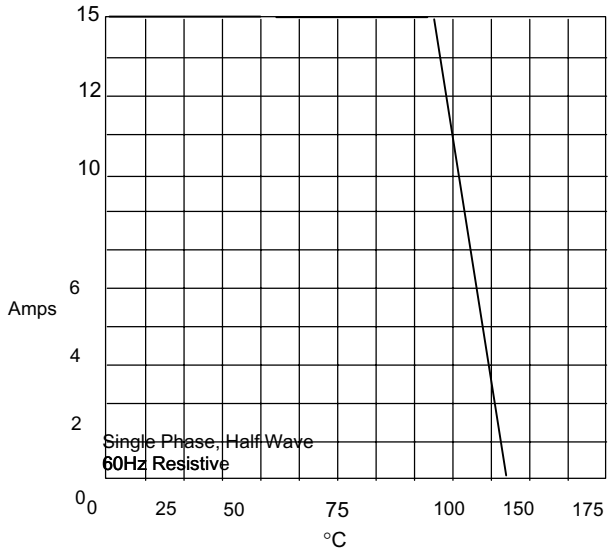
Instantaneous Forward Current - Amperes
versus Instantaneous Forward Voltage - Volts

Figure 1 Typical Forward Characteristics



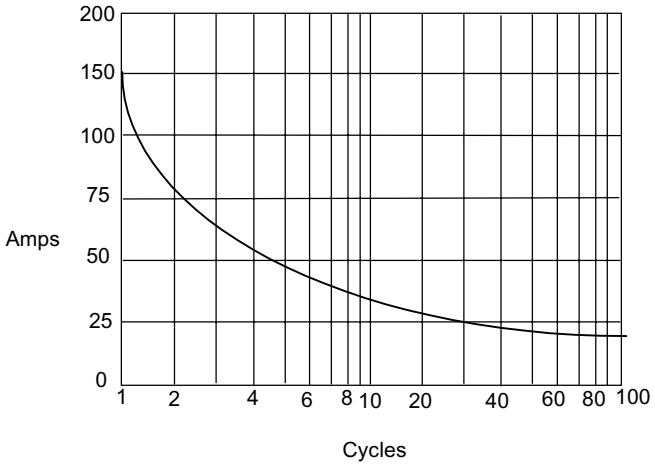
Instantaneous Reverse Leakage Current - MicroAmperes
versus Percent Of Rated Peak Reverse Voltage - Volts

Figure 2 Typical Reverse Characteristics



Average Forward Rectified Current - Amperes *versus*
Case Temperature -°C

Figure 3 Forward Derating Curve



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 4
Maximum Non-Repetitive Forward Surge Current

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