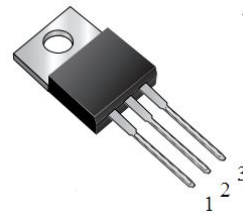# MUR1660CT&MUR1660FCT
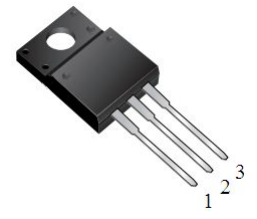
16.0AMPS. HIGH EFFICIENT RECTIFIERS

FEATURE

. Low forward voltage drop

. High current capability

. High reliability

. High surge current capability

. Epitaxial construction

. High temperature soldering guaranteed
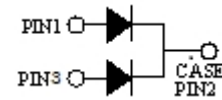 260°C /10seconds, 0.25"(6.35mm)from case.

TO-220AB
MUR1660CT

ITO-220AB
MUR1660FCT

MECHANICAL DATA

. Case: Molded with UL-94 Class V-0 recognized
  Flame Retardant Epoxy

. Mounting position: any

PIN1

PIN3

CASE PIN2

Single phase, half wave, 60Hz,resistive or inductive load.

For capacitive load, derate current by 20%

\

MAXIMUM RATINGS (T$_C$=25℃ unless otherwise noted)

Parameter	Symbol	MUR1660CT&MUR1660FCT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS Voltage	V_{RMS}	420	V
Maximum DC blocking Voltage	V_{DC}	600	V
Maximum Average Forward Rectified Current *Per Leg* at T$_C$ =100°C *Total device*	$I_{F(AV)}$	8.0 16.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) *Per Leg*	I_{FSM}	100.0	A
Maximum Reverse Recovery Time (Note 1)	t_{rr}	50	nS
Typical Junction Capacitance (Note 2)	C_J	80	pF
Operation Junction Temperature and Storage Temperature	T_J, T_{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T$_C$=25℃ unless otherwise noted)

Parameter	Symbol	Typ	Max	Units
Maximum Forward Voltage (*Per Leg*) at 8.0A DC	V_F	1.4	1.7	V
Maximum DC Reverse Current @T$_A$=25°C at rated DC blocking voltage @T$_A$ =100°C	I_R	---- ----	10.0 400.0	μA

THERMAL CHARACTERISTICS(T$_C$=25℃ unless otherwise noted)

Parameter	Symbol	MUR1660CT	MUR1660FCT	Units
Typical Thermal Resistance (Note 3)	$R_{(JC)}$	2.5	3.5	°C /W

Notes:

1. Test Conditions: I$_F$=0.5A, I$_R$=1.0A, I$_{RR}$=0.25A

2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc

3. Thermal Resistance From Junction to Case

RATING AND CHARACTERISTIC CURVES
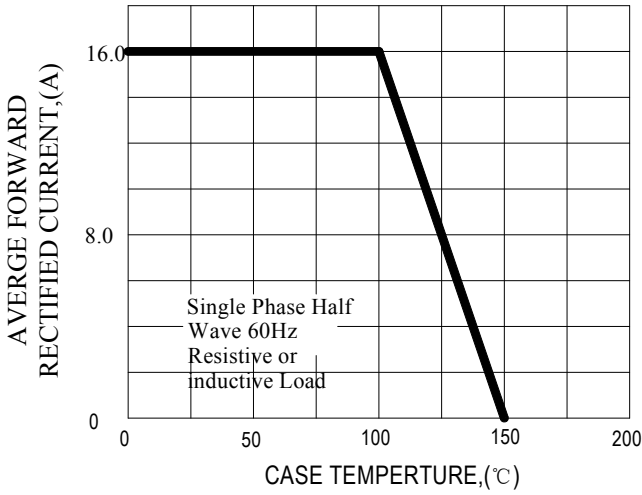
FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

FIG.2-TYPICAL INSTANTANEOUS FORWARD
CHARACTERISTICS

Single Phase Half
Wave 60Hz
Resistive or
inductive Load

$T_J=25℃$
Pulse Width=300 μ s
1% Duty Cycle

AVERGE FORWARD RECTIFIED CURRENT,(A)

CASE TEMPERTURE,(℃)

INSTANEOUS FORWARD CURRENT,(A)
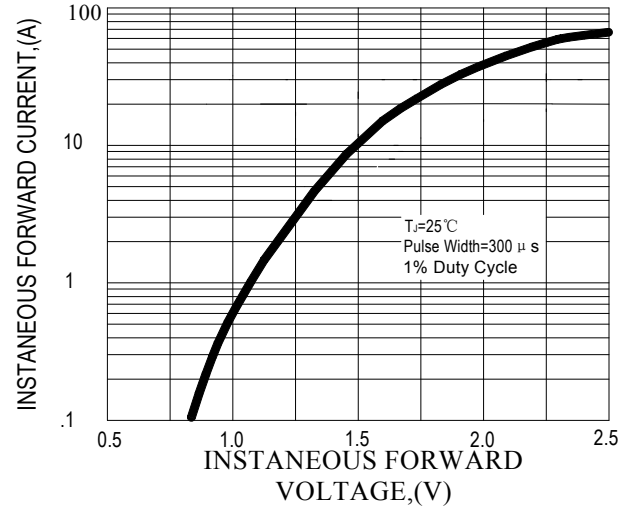
INSTANEOUS FORWARD VOLTAGE,(V)

FIG.3-MAXIMUN NON-REPETITIVE
FORWARD SURGE CURRENT
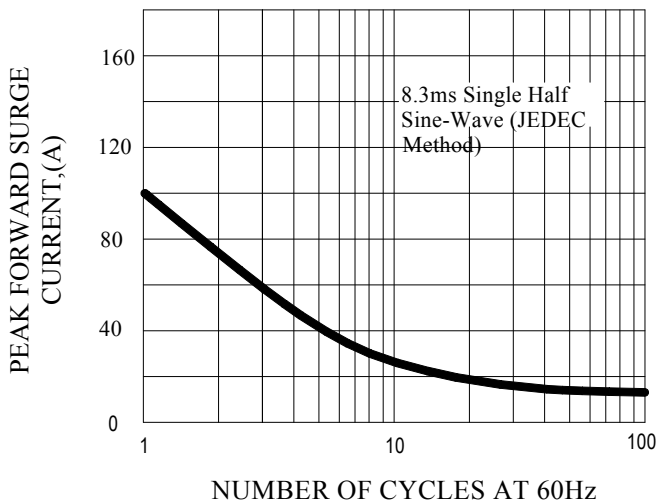
FIG.4-TYPICAL REVERSE
CHARACTERISTICS

8.3ms Single Half
Sine-Wave (JEDEC
Method)

$T_J=25℃$

PEAK FORWARD SURGE CURRENT,(A)

NUMBER OF CYCLES AT 60Hz
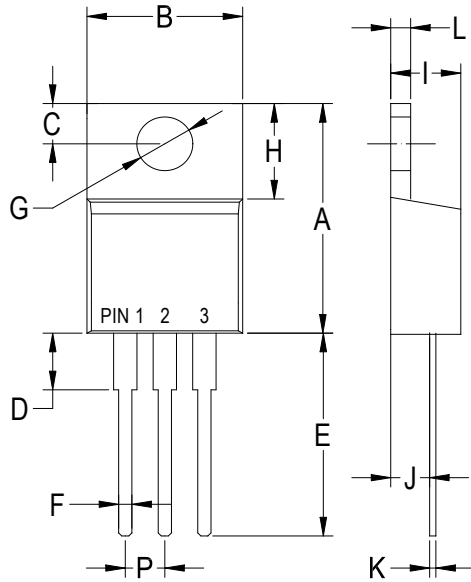
INSTANEOUS REVERSE CURRENT,(μ A)

PERCENT OF RATED PEAK REVERSE
VOLTAGE,(%)
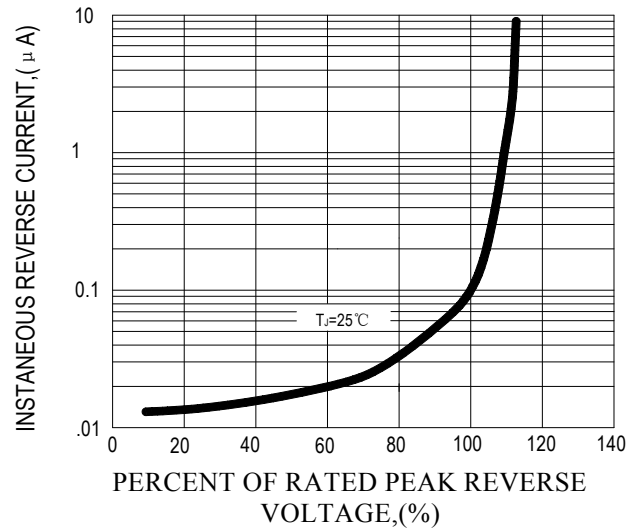
FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE
RECOVERY TIME CHARACTERSITIC

50 Ω
NONINDUCTIVE

10 Ω
NONINDUCTIVE

(+)

(+)

25Vdc
(approx)
(-)

1 Ω
NON-
INDUCTIVE

(NOTE 1)
OSCILOSCOPE

PULSE
GENERATOR
(NOTE 2)

(-)

+0.5A

trr

0

-0.25A

-1.0A

NOTES:1. Rise Time=7ns max, Input
Impedance= 1 megohm.22pF.
2. Rise Time=10ns max,
Souce Impedance= 50 ohms.
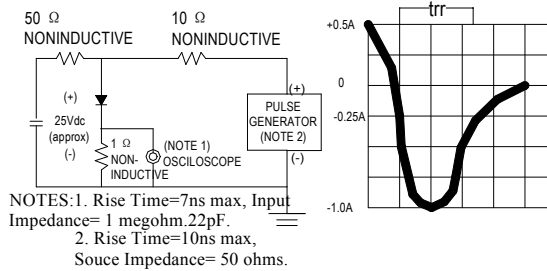
PACKAGE OUTLINE DIMENSIONS

TO-220AB

TO-220AB		
Dim	Min	Max
A	.573(14.55)	.603(15.32)
B	——	.412(10.5)
C	.103(2.62)	.113(2.87)
D	.140(3.56)	.160(4.06)
E	.510(13.0)	.560(14.3)
F	.027(0.68)	.037(0.94)
G	.148(3.74)	.154(3.91)
H	.230(5.84)	.270(6.86)
I	.175(4.44)	.185(4.86)
J	.100(2.54)	.110(2.79)
K	.014(0.35)	.025(0.64)
L	.045(1.14)	.055(1.40)
P	.095(2.41)	.105(2.67)

Dimensions in inches and (millimeters)

ITO-220AB
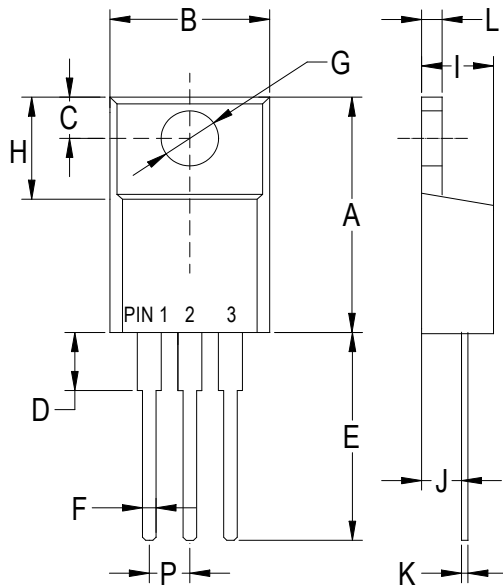
ITO-220AB		
Dim	Min	Max
A	.571(14.5)	.610(15.5)
B	.383(9.72)	.406(10.3)
C	.110(2.80)	.126(3.20)
D	.133(3.38)	.162(4.10)
E	.512(13.0)	.551(14.0)
F	.028(0.70)	.035(0.90)
G	.114(2.90)	.138(3.50)
H	.268(6.80)	.291(7.40)
I	.162(4.10)	.185(4.70)
J	.102(2.60)	.110(2.80)
K	.018(0.45)	.026(0.65)
L	.097(2.46)	.113(2.86)
P	.890(2.25)	.113(2.85)

Dimensions in inches and (millimeters)

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