

### Description

The MURF2040CT-01 is Fast Recovery Epi Diodes in a TO-220F Plastic Package.

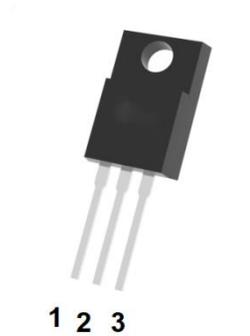
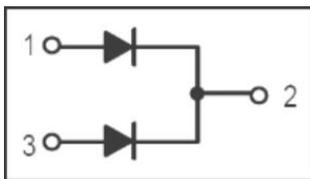
### Applications

Suitable for high frequency, high voltage, high current rectifier diode and continuous current diode.

### Features

- High frequency operation
- High surge forward current capability
- Halogen-free product

### Equivalent Circuit & Pinning



PIN1、 3: Anode    PIN 2: Cathode

### Marking

See Marking Instructions

**Absolute Maximum Ratings(Ta=25℃)**

Parameter	Symbol	Rating	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	400	V
Maximum RMS voltage	$V_{RMS}$	280	V
Maximum DC blocking Voltage	$V_{DC}$	400	V
Maximum Average Forward Rectified Current @Tc=100℃	$I_{F(AV)}$	10x2	A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	125	A
Maximum Thermal Resistance Junction To Case	$R_{\theta Jc}$	4	℃/W
Operation Junction Temperature and Storage Temperature	$T_j, T_{stg}$	-55~150	℃

**Electrical Characteristics(Ta=25℃)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=10A$ $T_C=25^\circ C$			1.3	V
Instantaneous Reverse Current	$I_R$	$V_R=600V$ $T_a=25^\circ C$			10	$\mu A$
		$V_R=600V$ $T_a=150^\circ C$			500	
Reverse Recovery Time	$t_{rr}$	$I_F=0.5A$ $I_R=1.0A$ $I_{RR}=0.25A$			35	ns

Electrical Characteristic Curve

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

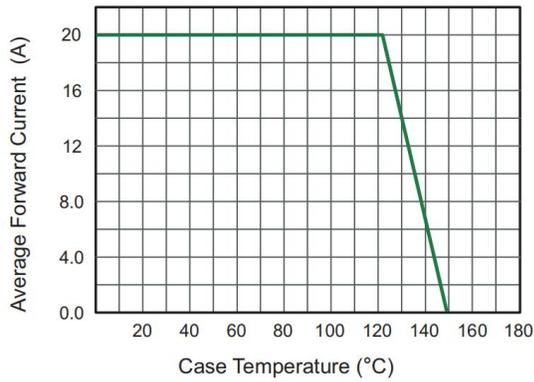


Fig.2 Typical Reverse Characteristics

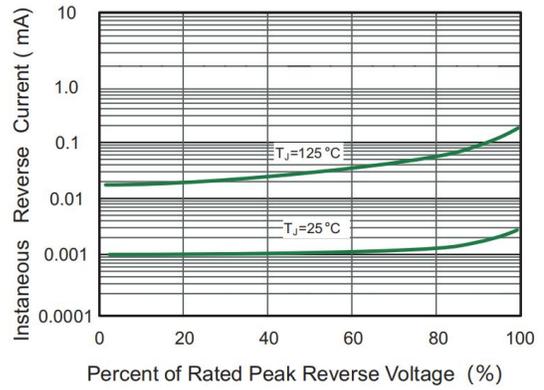


Fig.3 Typical Forward Characteristics

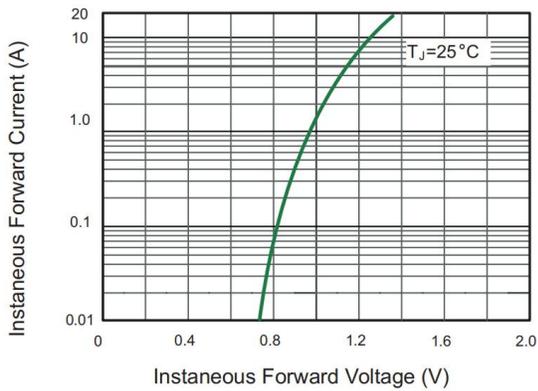
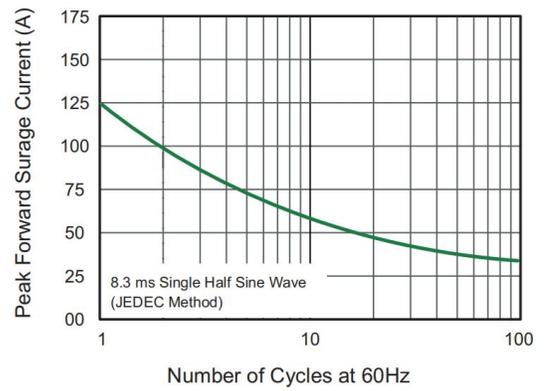
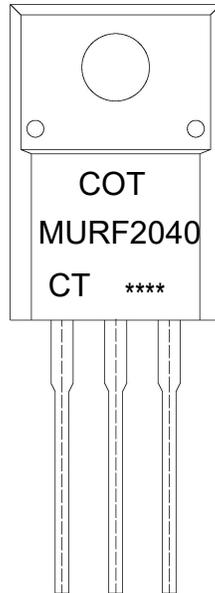


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



**Marking Instructions**


Note:

COT: Company Code

MURF2040: Product Type

CT: Internal Structure

\*\*\*\*: Lot No. Code, code change with Lot No

**Packaging SPEC.**
**BULK**

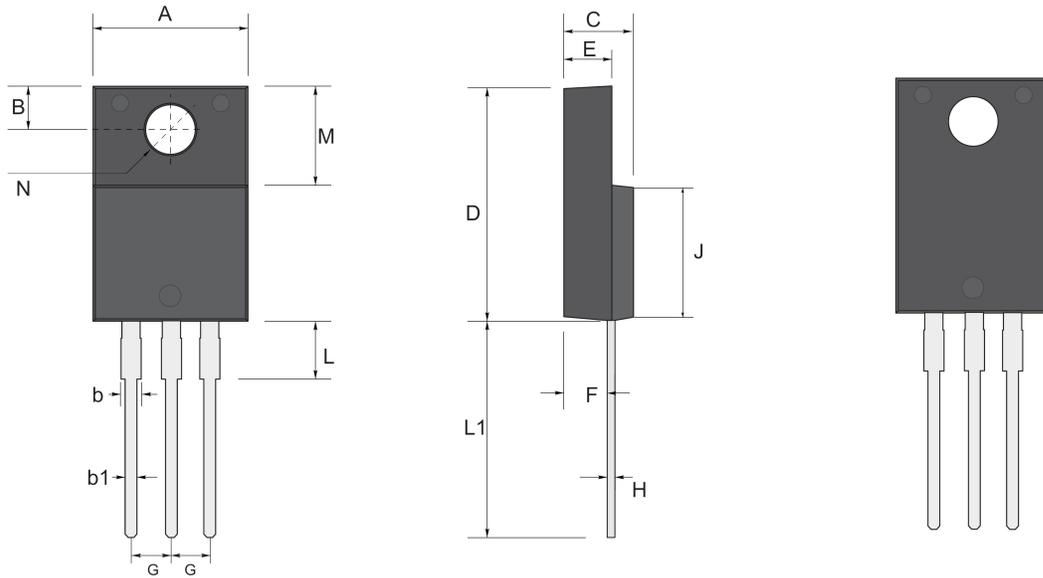
Package Type	Units					Dimension (unit: mm <sup>3</sup> )		
	Units/Bag	Bags/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Bag	Inner Box	Outer Box
TO-220/F/AC	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

**TUBE**

Package Type	Units					Dimension (unit: mm <sup>3</sup> )		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-220/F/AC	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

Package Dimensions

TO-220F



UNIT		A	B	b	b1	C	D	E	F	G	H	L	L1	M	N
mm	max	10.5	2.85	1.4	0.8	4.7	16.0	2.9	2.8	2.54 TYPICAL	0.70	2.9	14.3	7.0	3.4 TYPICAL
	typ	10.0	2.70	1.2	0.6	4.5	15.0	2.7	2.7		0.55	2.5	13.5	6.8	
	min	9.85	2.54	1.1	0.5	4.4	14.7	2.5	2.5		0.41	2.3	13.0	6.3	
mil	max	413	112	55	31	185	630	114	110	100 TYPICAL	27	114	563	276	133 TYPICAL
	typ	394	106	47	24	177	590	106	106		22	98	531	267	
	min	388	100	43	20	173	580	98	98		16	91	512	248	