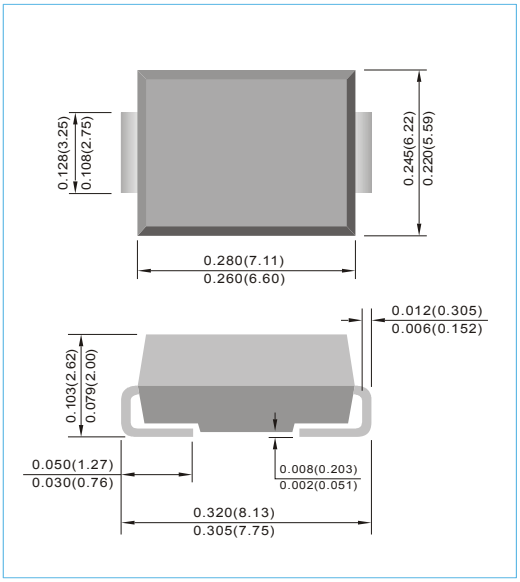
1.5SMCJ SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR PEAK PULSE POWER 1500 Watts

STAND-OFF VOLTAGE **5 to 220 Volts**

SMC / DO-214AB Unit : inch(mm)



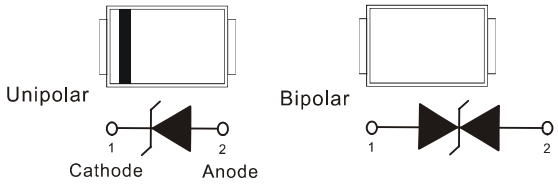
Recongnized File # E210467

FEATURES

- For surface mounted applications in order to optimize board space.
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- Lead free in comply with EU RoHS 2011/65/EU directives
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: JEDEC DO-214AB,Molded plastic over passivated junction.
- Terminals: Solder plated,solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard Packaging: 16mm tape (EIA-481)
- Weight: 0.007 ounce, 0.021 gram



DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 1.5SMCJ5.0 thru types 1.5SMCJ220.
Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Rating at 25°Cambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.
For Capacitive load derate current by 20%.

Rating	Symbol	Value	Units
Peak Power Dissipation at T_A=25°C, T_P=1ms (Notes 1)	P_{PP}	1500	Watts
Peak Pulse Current on 10/1000μs waveform (Notes 1)	I_{PPM}	See table	Amps
Typical Thermal Resistance Junction to Air (Notes 2)	$R_{\theta JA}$	50	°C / W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JECED Method) (Notes 3)	I_{FSM}	200	Amps
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150	°C

NOTES:
1.Non-repetitive current pulse, per Fig. 3 and derated above T_A=25°Cper Fig. 2.
2.Mounted on 2.0mm² (.013mm thick) land areas.
3.Measured on 8.3ms , single half sine-wave or equivalent square wave , duty cycle= 4 pulses per minutes maximum.
4.A transient suppressor is selected according to the working peak reverse voltage (V_{RWM}), which should be equal to or greater than the DC or continuous peak operating voltage level.

1.5SMCJ SERIES

Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage		Max. Clamp Voltage 10/1000μs	Peak Pulse Current 10/1000μs	Marking Code	
		V_{RWM} (Notes 4)	V_{BR} @ I_T		I_T	I_R @ V_{RWM}		V_C @ I_{PP}	I_{PP}		
			Min.	Max.		UNI	BI				
UNI	BI	V	V	V	mA	μA	μA	V	A	UNI	BI
1500W Transient Voltage Suppressor											
1.5SMCJ5.0	1.5SMCJ5.0C	5	6.4	7.55	10	1000	2000	9.6	156.2	GDD	BDD
1.5SMCJ5.0A	1.5SMCJ5.0CA	5	6.4	7.25	10	1000	2000	9.2	163	GDE	BDE
1.5SMCJ6.0	1.5SMCJ6.0C	6	6.67	8.45	10	1000	2000	11.4	131.6	GDF	BDF
1.5SMCJ6.0A	1.5SMCJ6.0CA	6	6.67	7.67	10	1000	2000	10.3	145.6	GDG	BDG
1.5SMCJ6.5	1.5SMCJ6.5C	6.5	7.22	9.14	10	500	1000	12.3	122	GDH	BDH
1.5SMCJ6.5A	1.5SMCJ6.5CA	6.5	7.22	8.3	10	500	1000	11.2	133.9	GDK	BDK
1.5SMCJ7.0	1.5SMCJ7.0C	7	7.78	9.86	10	200	400	13.3	112.8	GDL	BDL
1.5SMCJ7.0A	1.5SMCJ7.0CA	7	7.78	8.95	10	200	400	12	125	GDM	BDM
1.5SMCJ7.5	1.5SMCJ7.5C	7.5	8.33	10.67	1	100	200	14.3	104.9	GDN	BDN
1.5SMCJ7.5A	1.5SMCJ7.5CA	7.5	8.33	9.58	1	100	200	12.9	116.3	GDP	BDP
1.5SMCJ8.0	1.5SMCJ8.0C	8	8.89	11	1	50	100	15	100	GDQ	BDQ
1.5SMCJ8.0A	1.5SMCJ8.0CA	8	8.89	10.23	1	50	100	13.6	110.3	GDR	BDR
1.5SMCJ8.5	1.5SMCJ8.5C	8.5	9.44	11.92	1	25	50	15.9	94.3	GDS	BDS
1.5SMCJ8.5A	1.5SMCJ8.5CA	8.5	9.44	10.82	1	25	50	14.4	104.2	GDT	BDT
1.5SMCJ9.0	1.5SMCJ9.0C	9	10	12.6	1	10	20	16.9	88.7	GDU	BDU
1.5SMCJ9.0A	1.5SMCJ9.0CA	9	10	11.5	1	10	20	15.4	97.4	GDV	BDV
1.5SMCJ10	1.5SMCJ10C	10	11.1	14.1	1	5	5	18.8	79.8	GDW	BDW
1.5SMCJ10A	1.5SMCJ10CA	10	11.1	12.8	1	5	5	17	88.2	GDX	BDX
1.5SMCJ11	1.5SMCJ11C	11	12.2	15.4	1	1	1	20.1	74.6	GDY	BDY
1.5SMCJ11A	1.5SMCJ11CA	11	12.2	14	1	1	1	18.2	82.4	GDZ	BDZ
1.5SMCJ12	1.5SMCJ12C	12	13.3	16.9	1	1	1	22	68.2	GED	BED
1.5SMCJ12A	1.5SMCJ12CA	12	13.3	15.3	1	1	1	19.9	75.3	GEE	BEE
1.5SMCJ13	1.5SMCJ13C	13	14.4	18.2	1	1	1	23.8	63	GEF	BEF
1.5SMCJ13A	1.5SMCJ13CA	13	14.4	16.5	1	1	1	21.5	69.7	GEG	BEG
1.5SMCJ14	1.5SMCJ14C	14	15.6	19.8	1	1	1	25.8	58.1	GEH	BEH
1.5SMCJ14A	1.5SMCJ14CA	14	15.6	17.9	1	1	1	23.2	64.7	GEK	BEK
1.5SMCJ15	1.5SMCJ15C	15	16.7	21.1	1	1	1	26.9	55.8	GEL	BEL
1.5SMCJ15A	1.5SMCJ15CA	15	16.7	19.2	1	1	1	24.4	61.5	GEM	BEM
1.5SMCJ16	1.5SMCJ16C	16	17.8	22.6	1	1	1	28.8	52.1	GEN	BEN
1.5SMCJ16A	1.5SMCJ16CA	16	17.8	20.5	1	1	1	26	57.7	GEP	BEP
1.5SMCJ17	1.5SMCJ17C	17	18.9	23.9	1	1	1	30.5	49.2	GEQ	BEQ
1.5SMCJ17A	1.5SMCJ17CA	17	18.9	21.7	1	1	1	27.6	53.3	GER	BER
1.5SMCJ18	1.5SMCJ18C	18	20	25.3	1	1	1	32.2	46.6	GES	BES
1.5SMCJ18A	1.5SMCJ18CA	18	20	23.3	1	1	1	29.2	51.4	GET	BET
1.5SMCJ20	1.5SMCJ20C	20	22.2	28.1	1	1	1	35.8	41.9	GEU	BEU
1.5SMCJ20A	1.5SMCJ20CA	20	22.2	25.5	1	1	1	32.4	46.3	GEV	BEV
1.5SMCJ22	1.5SMCJ22C	22	24.4	30.9	1	1	1	39.4	38.1	GEW	BEW
1.5SMCJ22A	1.5SMCJ22CA	22	24.4	28	1	1	1	35.5	42.2	GEX	BEX
1.5SMCJ24	1.5SMCJ24C	24	26.7	33.8	1	1	1	43	34.9	GEY	BEY
1.5SMCJ24A	1.5SMCJ24CA	24	26.7	30.7	1	1	1	38.9	38.6	GEZ	BEZ
1.5SMCJ26	1.5SMCJ26C	26	28.9	36.6	1	1	1	46.6	32.2	GFD	BFD
1.5SMCJ26A	1.5SMCJ26CA	26	28.9	33.2	1	1	1	42.1	35.6	GFE	BFE
1.5SMCJ28	1.5SMCJ28C	28	31.1	39.4	1	1	1	50	30	GFF	BFF
1.5SMCJ28A	1.5SMCJ28CA	28	31.1	35.8	1	1	1	45.4	33	GFG	BFG
1.5SMCJ30	1.5SMCJ30C	30	33.3	42.2	1	1	1	53.5	28	GFH	BFH
1.5SMCJ30A	1.5SMCJ30CA	30	33.3	38.3	1	1	1	48.4	31	GFK	BFK
1.5SMCJ33	1.5SMCJ33C	33	36.7	46.5	1	1	1	59	25.2	GFL	BFL
1.5SMCJ33A	1.5SMCJ33CA	33	36.7	42.2	1	1	1	53.3	28.1	GFM	BFM
1.5SMCJ36	1.5SMCJ36C	36	40	50.7	1	1	1	64.3	23.3	GFN	BFN
1.5SMCJ36A	1.5SMCJ36CA	36	40	46	1	1	1	58.1	25.8	GFP	BFP
1.5SMCJ40	1.5SMCJ40C	40	44.4	56.3	1	1	1	71.4	21	GFQ	BFQ
1.5SMCJ40A	1.5SMCJ40CA	40	44.4	51.1	1	1	1	64.5	23.2	GFR	BFR

1.5SMCJ SERIES

Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage		Max.Clamp Voltage 10/1000μs	Peak Pulse Current 10/1000μs	Marking Code	
		V_{RWM} (Notes 4)	V_{BR} @ I_T		I_T	I_R @ V_{RWM}		V_C @ I_{PP}	I_{PP}		
			Min.	Max.		UNI	BI				
UNI	BI	V	V	V	mA	μA	μA	V	A	UNI	BI
1500W Transient Voltage Suppressor											
1.5SMCJ43	1.5SMCJ43C	43	47.8	61	1	1	1	76.7	19.6	GFS	BFS
1.5SMCJ43A	1.5SMCJ43CA	43	47.8	55	1	1	1	69.4	21.6	GFT	BFT
1.5SMCJ45	1.5SMCJ45C	45	50	63	1	1	1	80.3	18.7	GFU	BFU
1.5SMCJ45A	1.5SMCJ45CA	45	50	57.5	1	1	1	72.7	20.6	GFV	BFV
1.5SMCJ48	1.5SMCJ48C	48	53.3	67.5	1	1	1	85.5	17.5	GFW	BFW
1.5SMCJ48A	1.5SMCJ48CA	48	53.3	61.3	1	1	1	77.4	19.4	GFX	BFX
1.5SMCJ51	1.5SMCJ51C	51	56.7	71.8	1	1	1	91.1	18.5	GFY	BFY
1.5SMCJ51A	1.5SMCJ51CA	51	56.7	65.2	1	1	1	82.4	18.2	GFZ	BFZ
1.5SMCJ54	1.5SMCJ54C	54	60	76	1	1	1	96.3	15.6	GGD	BGD
1.5SMCJ54A	1.5SMCJ54CA	54	60	69	1	1	1	87.1	17.2	GGE	BGE
1.5SMCJ58	1.5SMCJ58C	58	64.4	81.6	1	1	1	103	14.6	GGF	BGF
1.5SMCJ58A	1.5SMCJ58CA	58	64.4	74.1	1	1	1	93.6	16	GGG	BGG
1.5SMCJ60	1.5SMCJ60C	60	66.7	84.5	1	1	1	107	14	GGH	BGH
1.5SMCJ60A	1.5SMCJ60CA	60	66.7	76.7	1	1	1	96.8	15.5	GGK	BGK
1.5SMCJ64	1.5SMCJ64C	64	71.1	90.1	1	1	1	114	13.2	GGL	BGL
1.5SMCJ64A	1.5SMCJ64CA	64	71.1	81.8	1	1	1	103	14.6	GGM	BGM
1.5SMCJ70	1.5SMCJ70C	70	77.8	98.6	1	1	1	125	12	GGN	BGN
1.5SMCJ70A	1.5SMCJ70CA	70	77.8	89.5	1	1	1	113	13.3	GGP	BGP
1.5SMCJ75	1.5SMCJ75C	75	83.3	105.7	1	1	1	134	11.2	GGQ	BGQ
1.5SMCJ75A	1.5SMCJ75CA	75	83.3	95.8	1	1	1	121	12.4	GGR	BGR
1.5SMCJ78	1.5SMCJ78C	78	86.7	109.8	1	1	1	139	10.8	GGS	BGS
1.5SMCJ78A	1.5SMCJ78CA	78	86.7	99.7	1	1	1	126	11.4	GGT	BGT
1.5SMCJ85	1.5SMCJ85C	85	94.4	119.2	1	1	1	151	9.9	GGU	BGU
1.5SMCJ85A	1.5SMCJ85CA	85	94.4	108.2	1	1	1	137	10.4	GGV	BGV
1.5SMCJ90	1.5SMCJ90C	90	100	126.5	1	1	1	160	9.4	GGW	BGW
1.5SMCJ90A	1.5SMCJ90CA	90	100	115.5	1	1	1	146	10.3	GGX	BGX
1.5SMCJ100	1.5SMCJ100C	100	111	141	1	1	1	179	8.4	GGY	BGY
1.5SMCJ100A	1.5SMCJ100CA	100	111	128	1	1	1	162	9.3	GGZ	BGZ
1.5SMCJ110	1.5SMCJ110C	110	122	154.5	1	1	1	196	7.7	GHD	BHD
1.5SMCJ110A	1.5SMCJ110CA	110	122	140.5	1	1	1	177	8.4	GHE	BHE
1.5SMCJ120	1.5SMCJ120C	120	133	169	1	1	1	214	7	GHF	BHF
1.5SMCJ120A	1.5SMCJ120CA	120	133	153	1	1	1	193	7.9	GHG	BHG
1.5SMCJ130	1.5SMCJ130C	130	144	182.5	1	1	1	231	6.5	GHH	BHH
1.5SMCJ130A	1.5SMCJ130CA	130	144	165.5	1	1	1	209	7.2	GHK	BHK
1.5SMCJ150	1.5SMCJ150C	150	167	211.5	1	1	1	268	5.6	GHL	BHL
1.5SMCJ150A	1.5SMCJ150CA	150	167	192.5	1	1	1	243	6.2	GHM	BHM
1.5SMCJ160	1.5SMCJ160C	160	178	226	1	1	1	287	5.2	GHN	BHN
1.5SMCJ160A	1.5SMCJ160CA	160	178	205	1	1	1	259	5.8	GHP	BHP
1.5SMCJ170	1.5SMCJ170C	170	189	239.5	1	1	1	304	4.9	GHQ	BHQ
1.5SMCJ170A	1.5SMCJ170CA	170	189	217.5	1	1	1	275	5.5	GHR	BHR
1.5SMCJ180	1.5SMCJ180C	180	198	253.8	1	1	1	322	4.7	GHS	BHS
1.5SMCJ180A	1.5SMCJ180CA	180	198	230.4	1	1	1	292	5.1	GHT	BHT
1.5SMCJ190	1.5SMCJ190C	190	209	267.9	1	1	1	340	4.4	GHU	BHU
1.5SMCJ190A	1.5SMCJ190CA	190	209	243.2	1	1	1	308	4.8	GHV	BHV
1.5SMCJ200	1.5SMCJ200C	200	220	282	1	1	1	358	4.1	GHW	BHW
1.5SMCJ200A	1.5SMCJ200CA	200	220	256	1	1	1	324	4.6	GHX	BHX
1.5SMCJ210	1.5SMCJ210C	210	231	296.1	1	1	1	376	4	GHY	BHY
1.5SMCJ210A	1.5SMCJ210CA	210	231	268.8	1	1	1	340	4.4	GHZ	BHZ
1.5SMCJ220	1.5SMCJ220C	220	242	310.2	1	1	1	394	3.8	GID	BID
1.5SMCJ220A	1.5SMCJ220CA	220	242	281.6	1	1	1	356	4.2	GIE	BIE

1.5SMCJ SERIES

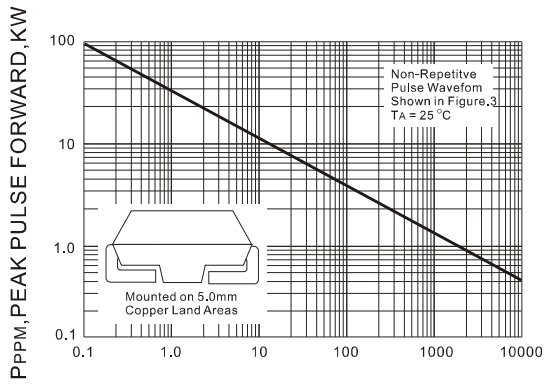


Fig.1 PEAK PULSE POWER RATING CURVE

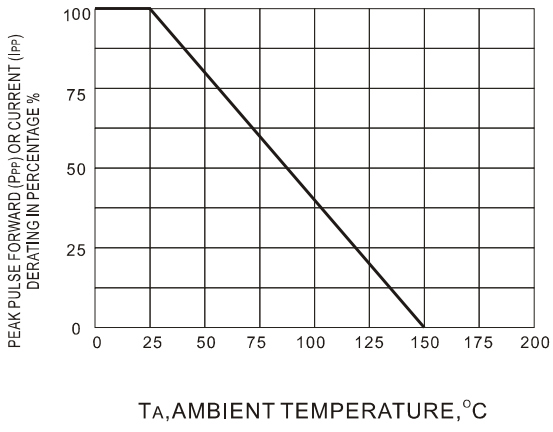


Fig.2 DERATING CURVE

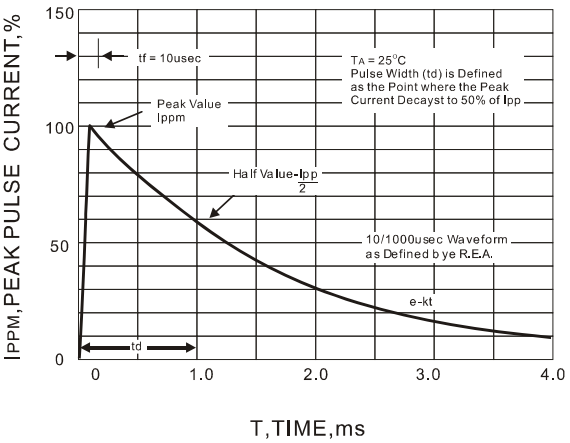


Fig.3 PULSE WAVEFORM

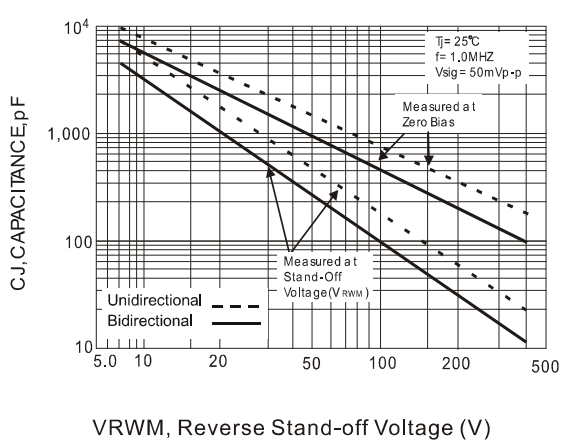


Fig.4 TYPICAL JUNCTION CAPACITANCE

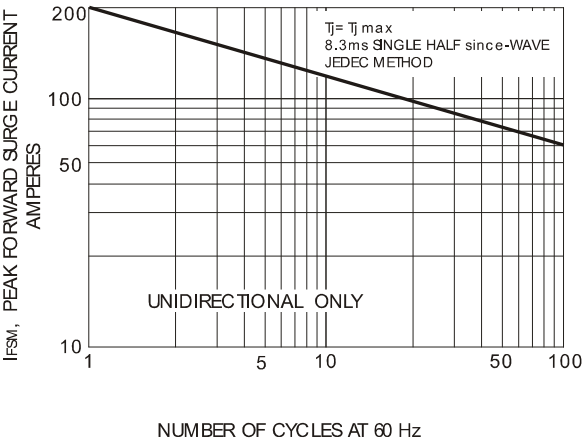
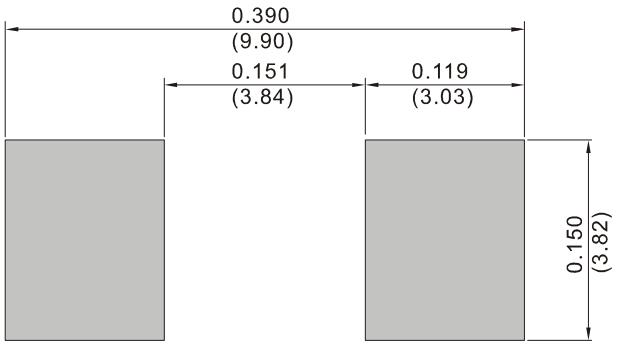


Fig.5 MAXIMUN NON-REPETITEVE PEAK FORWARD SURGE CURRENT UNIDIRECTIONAL

1.5SMCJ SERIES

MOUNTING PAD LAYOUT

SMC / DO-214AB Unit : inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 3K per 13" plastic Reel

  T/R - 0.5K per 7" plastic Reel

1.5SMCJ SERIES

Part No_packing code_Version

1.5SMCJ5.0_R1_00001

1.5SMCJ5.0_R2_00001

For example :

RB500V-40_R2_00001

- Part No.
- Serial number
- Version code means HF
- Packing size code means 13"
- Packing type means T/R

Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

1.5SMCJ SERIES

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.