



DATA SHEET

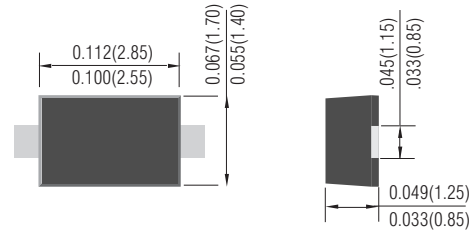
SEMICONDUCTOR

MBRL220S Thru MBRL240S

Features

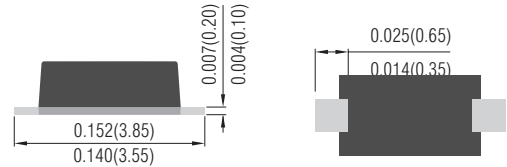
- Plastic package has Underwriters Laboratory Flammability Classification 94V-Outer Utilizing Flame Retardant Epoxy Molding Compound.
- For surface mounted applications.
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage current

SOD-123S Unit:inch(mm)



Mechanical data

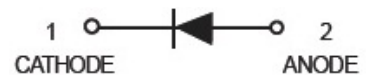
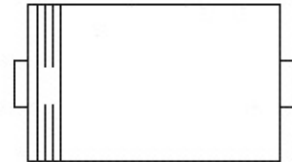
Case : Molded plastic, JEDEC SOD-123S
 Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
 Polarity : Indicated by cathode band
 Mounting Position : Any



MAXIMUM RATINGS (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I _O			2.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I _{FSM}			50	A
Reverse current	V _R = V _{RRM} T _A = 25°C	I _R			1.0	mA
	V _R = V _{RRM} T _A = 125°C				25	mA
Thermal resistance	Junction to ambient	R _{θJA}		98		°C / w
Diode junction capacitance	f=1MHz and applied 4vDC reverse voltage	C _J		120		pF
Storage temperature		T _{STG}	-55		+150	°C

SYMBOLS	V _{RRM} *1 (V)	V _{RMS} *2 (V)	V _R *3 (V)	V _F *4 (V)	Operating temperature (°C)
MBRL220S	20	14	20	0.38	-55 to +150
MBRL230S	30	21	30	0.38	
MBRL240S	40	28	40	0.40	



DEVICE MARKING

MBRL220S	L22
MBRL230S	L23
MBRL240S	L24

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage @ 2A

DEVICE CHARACTERISTICS

MBRL220S Thru MBRL240S

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

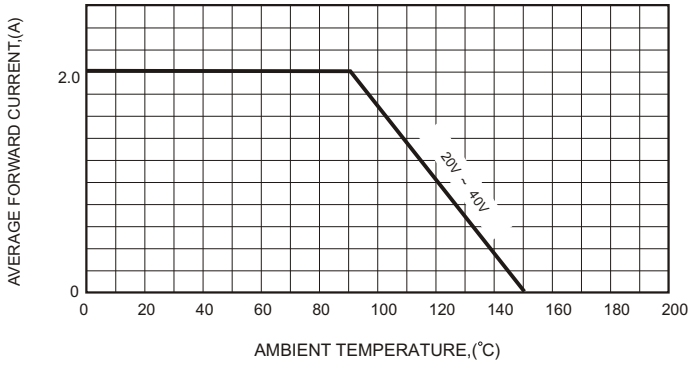


FIG.2-TYPICAL FORWARD CHARACTERISTICS

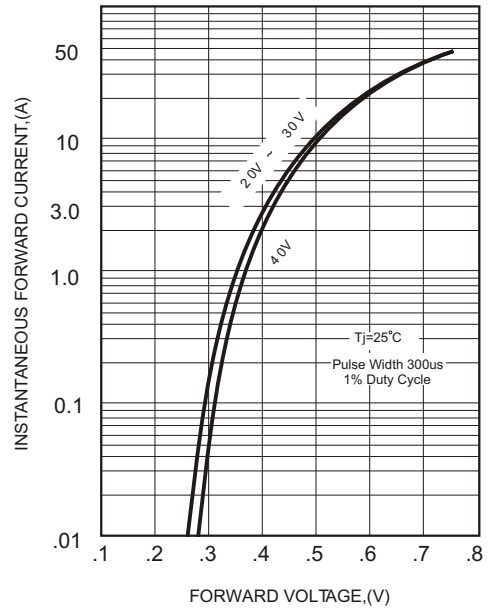


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

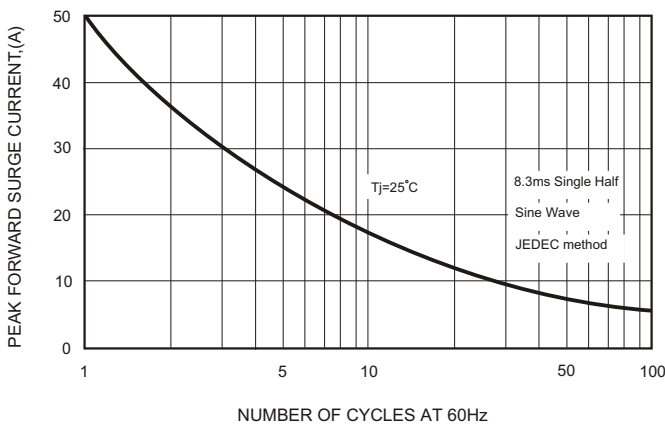


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

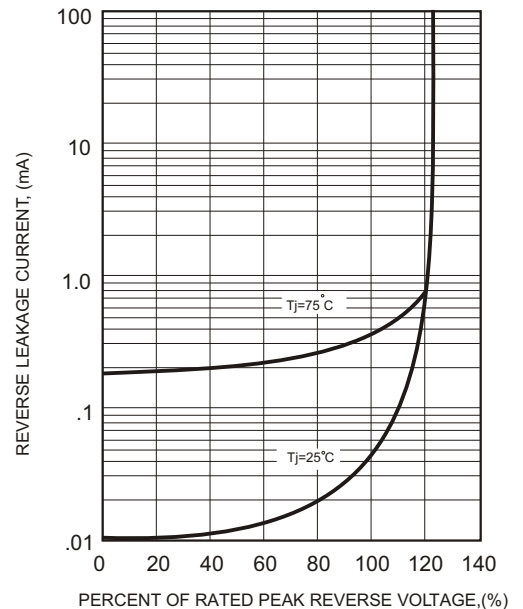
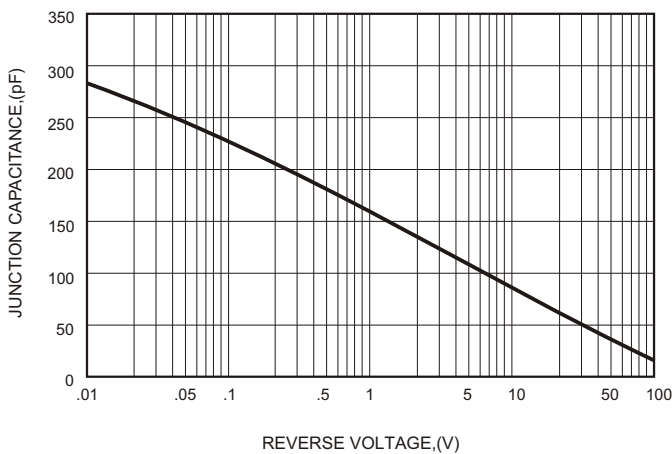
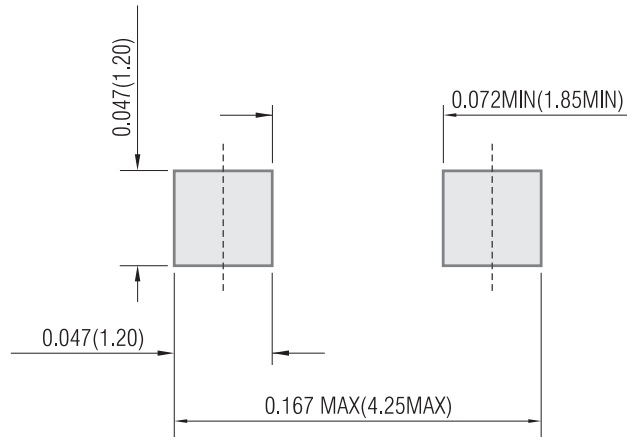


FIG.4-TYPICAL JUNCTION CAPACITANCE





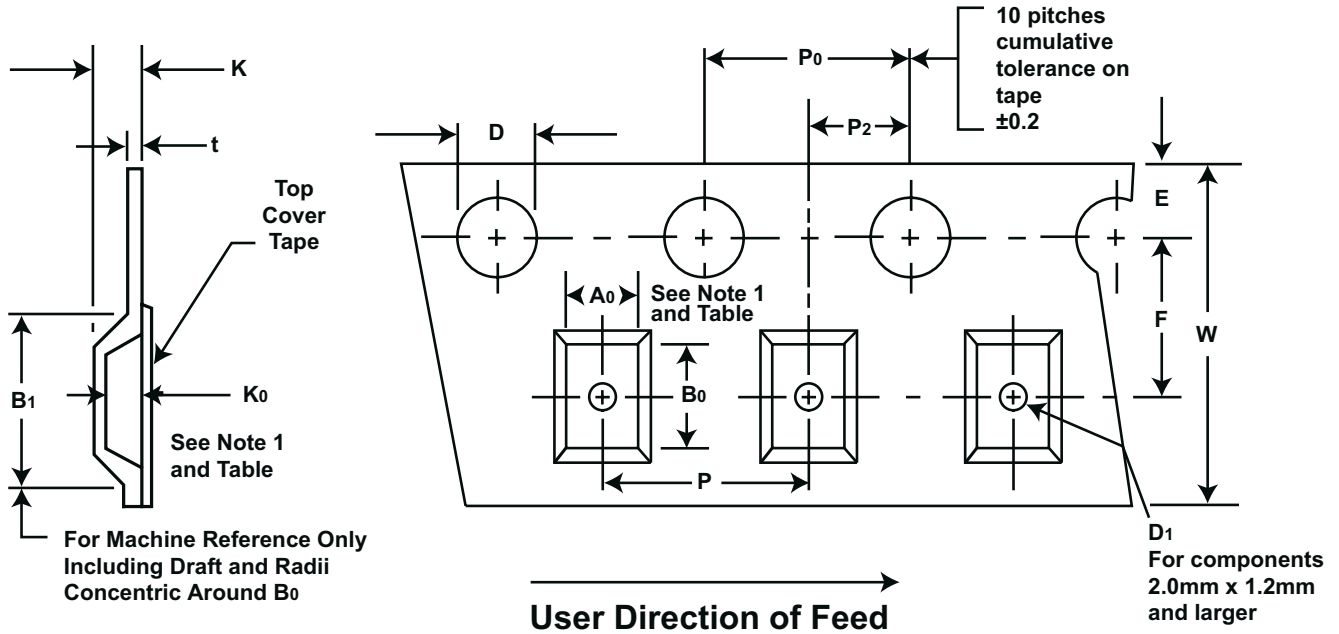
SOD-123S Soldering Footprint



Unit: inch (mm)



SURFACE MOUNT PACKAGING



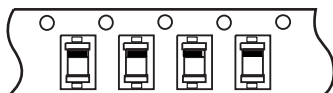
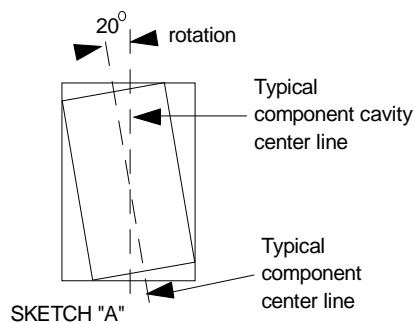
EMBOSSED TAPE

ALL DIMENSION IN MILLIMETERS

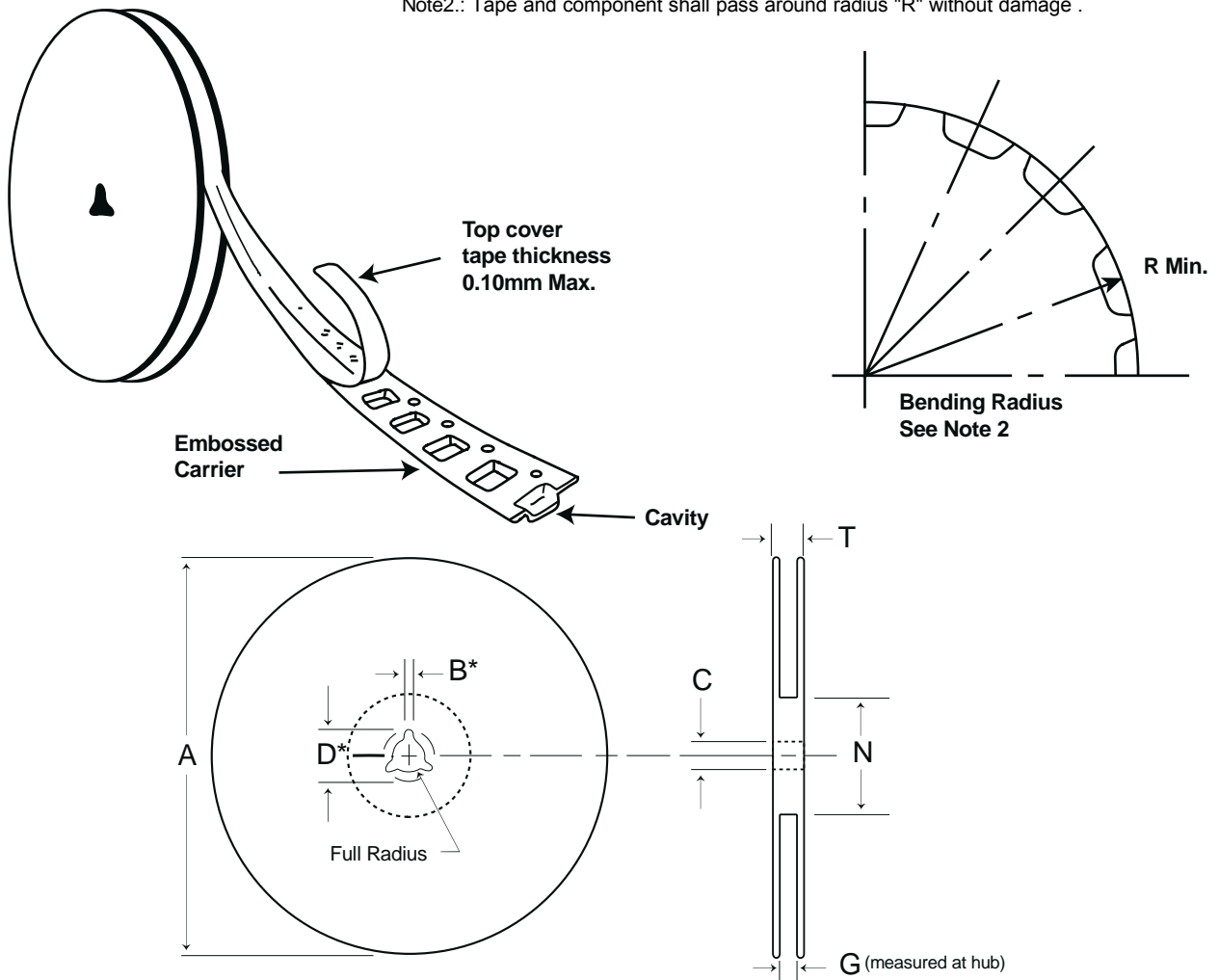
Tape Size	D	E	Po	t(Max)	Ao Bo Ko	Constant Dimensions
8, 12, 16 mm	$1.55 + 0.1 - 0.0$	1.75 ± 0.10	4.0 ± 0.10	0.400	See Note 1	

Product Type	Tape Size	B1 Max.	D1 Min.	F	K Max.	P2	R	W	P
SOT-23/323/363 SOD-123/323	8mm	4.5	1.0	3.5 ± 0.05	2.4	2.0 ± 0.05	25	8.0 ± 0.3	4.0 ± 0.1
SMA SMF SMB MINI DIP	12mm	8.2	1.5	5.5 ± 0.05	4.5	2.0 ± 0.05	30	12.0 ± 0.3	8.0 ± 0.1
SMC DFS	16mm	12.1		7.5 ± 0.1	3.29 3.70	2.0 ± 0.1 4.0 ± 0.1	40 50	16.0 ± 0.3	12.0 ± 0.1

Note1.: A0B0K0 are determined by component size. The clearance between the component and the cavity must be within 0.05(.002) min. to 0.50 (.020) max. for 8 mm tape. 0.05(.002) min. to 0.65 (.025) max. for 12mm tape. 0.15 (0.006) min. to 0.90 (.035) max. for 16mm tape and 0.05(0.002) min. to 1.00 (.039) max. for 24 mm tape and larger. the component cannot rotate more than 20° within the determined cavity, see sketch "A" below



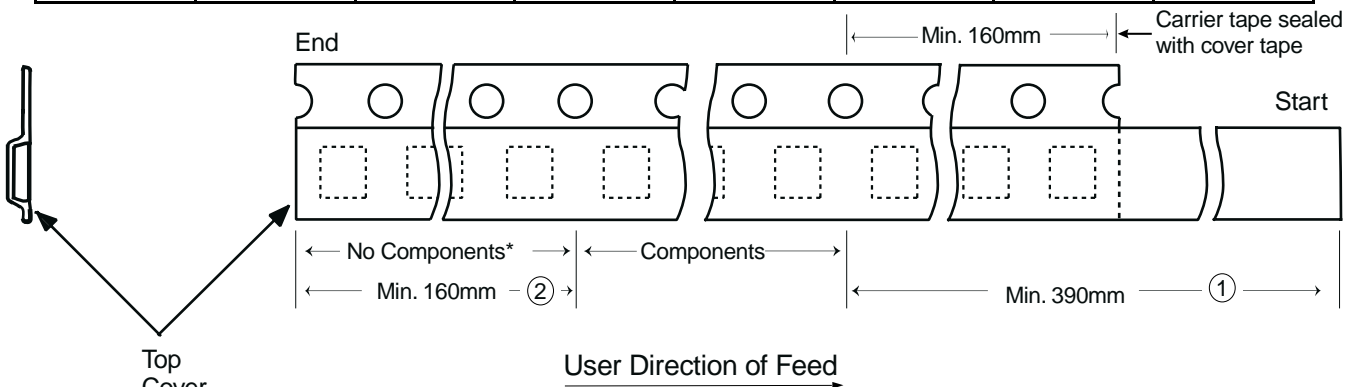
Note2.: Tape and component shall pass around radius "R" without damage .



* Drive spokes optional. If used, dimensions with asterisks apply.

ALL DIMENSION IN MILLIMETERS

Tape Size	A Max.	B* Max.	C	D* Max.	N Min.	G	T Max.
8mm	178	1.5	13.0±0.2	20.2	50	8.4 +1.5 -0.0	14.4
12mm	330	1.5	13.0±0.2	20.2	50	12.4 +2.0 -0.0	18.4
16mm	330	1.5	13.0±0.2	20.2	50	16.4 +2.0 -0.1	22.4



- Notes:
1. There shall be a leader of 230mm [9.05] minimum which may consist of carrier and/or cover tape or a start tape followed by a minimum of 160mm [6.30] of empty carrier tape sealed with cover tape.
 2. There shall be a trailer of 160mm [6.30] minimum of empty carrier tape sealed with cover tape. The entire carrier tape must release from the reel hub as the last portion of the tape unwinds from the reel without damage to the carrier tape and the remaining components in the cavities.

PACKAGING

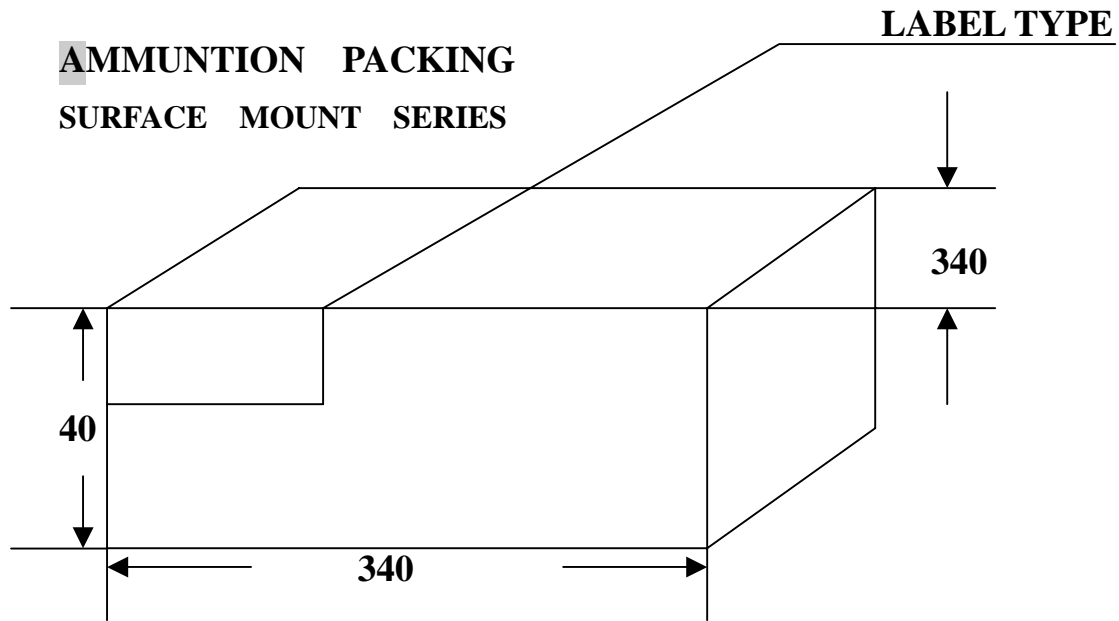
BOX SIZE:

PRODUCTS OUTLINE	DIMENSION (mm)			Q'TY PER BOX (PER REEL)
	A	B	C	
SOT-23/323/363 SOD-123/323	187	187	70	12000 (3000)
SMA/SMF	340	340	40	15000
SMB				6000 (3000)
MINI DIP				
SMC				
DFS				3000 (1500)

TUBE SIZE:

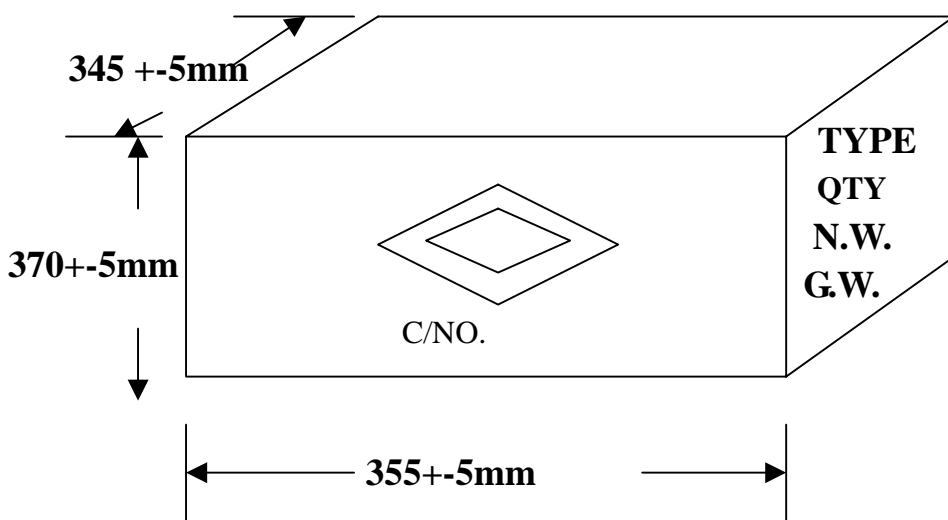
PRODUCTS OUTLINE	PACKAGEING SIZE (mm)		Q'TY PER BOX (PER TUBE)
	TUBE	BOX	
DFS	444*15*5.9	490*155*145	9000 (50)

AMMUNITION PACKING
SURFACE MOUNT SERIES

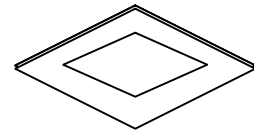


Box Dimensions :mm
Quantity per Box :7.5Kpcs/Roll,2Rolls/Box,15Kpcs/Box

CARTON



SHIPPING MARK



SIDEMARK

TYPE:
QTY:
N.W.:
G.W.:

Box dimensions: mm
Quantity per Box:15kpcs/Box. 8Box/carton,120kpcs/carton