CHENMKO ENTERPRISE CO.,LTD

MMHZ5221BGP-A

Halogens free devices

SURFACE MOUNT ZENER

SILICON PLANAR POWER ZENER DIODES

VOLTAGE RANGE 2.4V

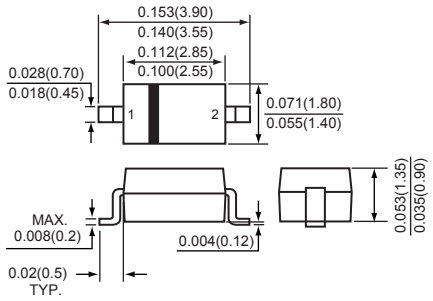
FEATURE

* Small surface mounting type. (SOD-123)
* High temperature soldering type.
* ESD rating of class 3(>16 kV) per human body model.
* Silicon planar zener diodes.
* Silcon-oxide passivated junction.
* Low temperature coefficient voltage
* 500 mW Rating on FR-4 or FR-5 Board

MECHANICAL

* SOD-123 Packaging.
* Cathode indicated by polarity band.
* Mounting position: Any.

SOD-123



Dimensions in inches and (millimeters)

SOD-123

CIRCUIT

MAXIMUM RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	VALUE	UNITS
Zener Current (see Table "Characteristics")	-	-	-
Max. Steady State Power Dissipation @T_A=25°C	P_D	225	mW
Max. Operating Temperature Range	T_J	-65 to +150	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	-	-	500	°C/W
Max. Instantaneous Forward Voltage at I_F= 10mA	V_F	-	-	0.9	Volts

2012-05

NOTES :
1. The JEDEC type numbers listd have a standaerd tolerance on the normal zener voltage of ±10%, Suffix B=±5%.Suffix S=±2%
2. The zener impedance is derived from 1KHz AC voltage, which results when an AC current having an RMS value equal to 10% of DC zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve to eliminate unstable units.
3. Valid provided that electrodes at distance of 10mm from case are kept ambient temperature.
4. Measured under thermal equilibrium and DC test conditions.
5. The rating listd in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current, I_{ZT}, per JEDEC registration.

ELECTRICAL CHARACTERISTICS (MMHZ5221BGP-A)

TYPE	Zener voltage V_Z (V) @ I_{ZT}			Test current	Maximum Zener impedance			Maximum reverse leakage current	
	Min	Nom	Max		Z_{ZT} at I_{ZT} (Ω)	Z_{ZK} (Ω)	at I_{ZK} (mA)	I_R (uA)	at V_R (V)
	Volts	Volts	Volts	I_{ZT} (mA)					
MMHZ5221BGP-A	2.280	2.4	2.520	5	100	1800	0.25	100	1

RATING CHARACTERISTIC CURVES (MMHZ5221BGP-A)

FIG. 5 - TYPICAL CAPACITANCE

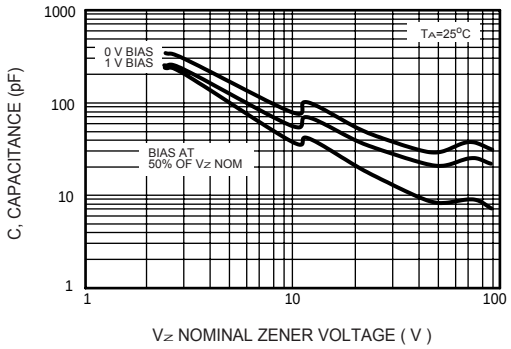


FIG. 6 - TYPICAL LEAKAGE CURRENT

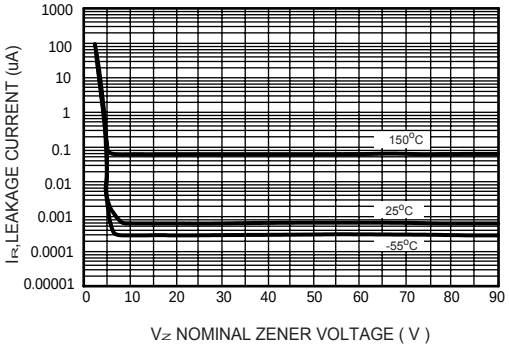


FIG. 7 - ZENER VOLTAGE VERSUS ZENER CURRENT
(V_Z UP TO 12V)

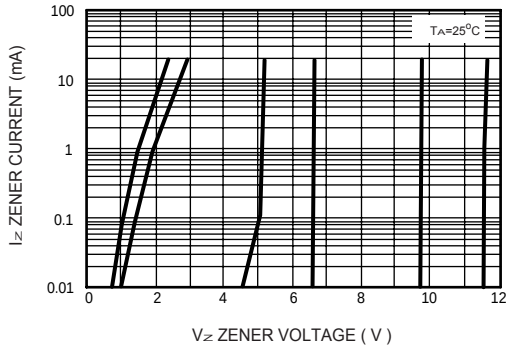
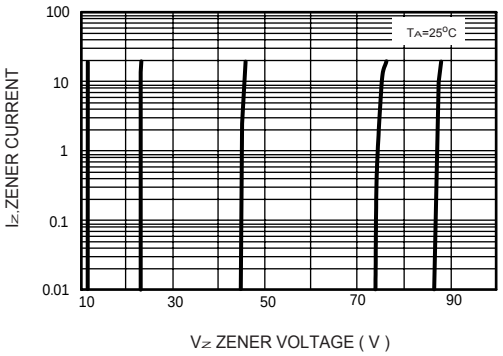


FIG. 8 - ZENER VOLTAGE VERSUS ZENER CURRENT
(12V TO 91V)



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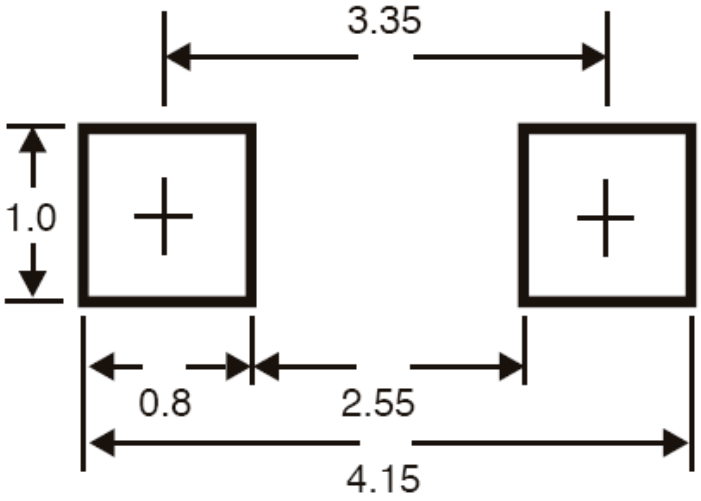
SURFACE MOUNT

RECOMMENDED FOOT PRINT

all dimensions in mm

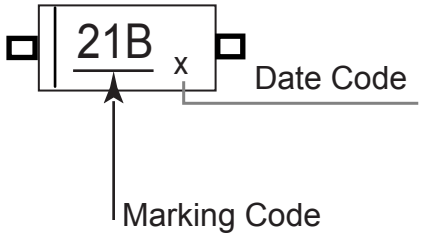
SOD-123

SOD-123



The Marking and Part No. for MMHZ5221BGP-A (SOD-123)

Marking:



Date Code Standard

Date Code	N	P	Q	R	S	T	U	V	W	X	Y	Z
2014Year	JAN.	FEB.	MAR.	APR	MAY	JUNE	JULY	AUG.	SEP.	OCT	NOV.	DEC.

Date Code	A	B	C	D	E	F	G	H	J	K	L	M
2015Year	JAN.	FEB.	MAR.	APR	MAY	JUNE	JULY	AUG.	SEP.	OCT	NOV.	DEC.

CUSTOMER :	APPROVED :	CHENMKO LTD.
APPROVED :	CHECKED :	
CHECKED :	DRAWN :	DRAWING No. :