



**THE DATASHEET OF  
CGRKM4001-HF**



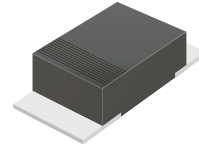
## CGRKM4001-HF Thru. CGRKM4007-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free



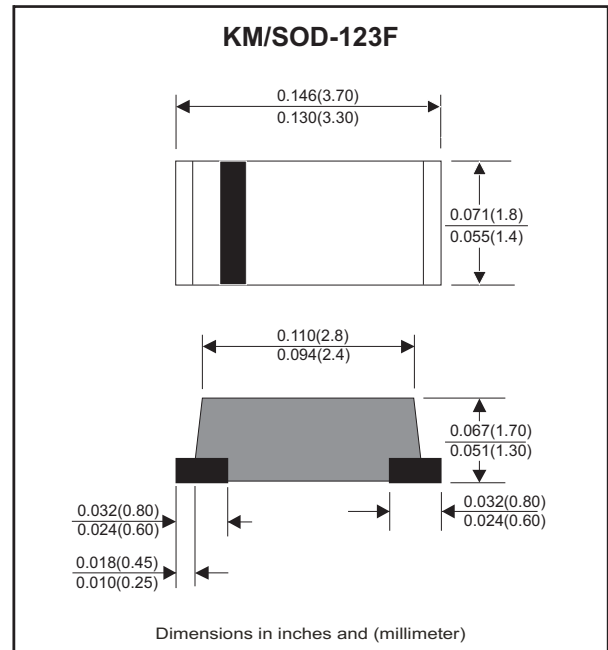
### Features

- Ideal for surface mount applications
- Easy pick and place
- Exceeds environmental standard MIL-STD-19500/228
- Low leakage current

### Mechanical data

- Epoxy: UL94V-0 rated flame retardant
- Case: Molded plastic, SOD-123F
- Terminals: Solderable per MIL-STD-750, method 2026
- Polarity: Indicated by cathode band
- Weight: 0.027 grams approx.

### Circuit diagram



### Maximum Ratings (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	CGRKM 4001-HF	CGRKM 4002-HF	CGRKM 4003-HF	CGRKM 4004-HF	CGRKM 4005-HF	CGRKM 4006-HF	CGRKM 4007-HF	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum averaged forward current	$I_o$	1.0							A
Maximum Instantaneous forward voltage at $I_F=1.0A$	$V_F$	1.1				1.0	1.1		V
Forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							A
Reverse current at rated DC blocking voltage	@ $T_A=25^\circ\text{C}$	5							$\mu\text{A}$
	@ $T_A=100^\circ\text{C}$	50							
Thermal resistance, junction to ambient air	$R_{\theta JA}$	60							$^\circ\text{C/W}$
Operating junction temperature	$T_J$	-55 to +150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-65 to +170							$^\circ\text{C}$
Junction capacitance $f=1\text{MHz}$ and applied 4V DC reverse voltage	$C_J$	15							pF

Notes: 1. Thermal resistance from junction to ambient and from junction to lead mounted on 0.2x0.2"(5.0x5.0mm) copper pad areas.

Company reserves the right to improve product design, functions and reliability without notice.

REV:G

## Rating and Characteristic Curves (CGRKM4001-HF Thru. CGRKM4007-HF)

Fig.1- Current Derating Curve

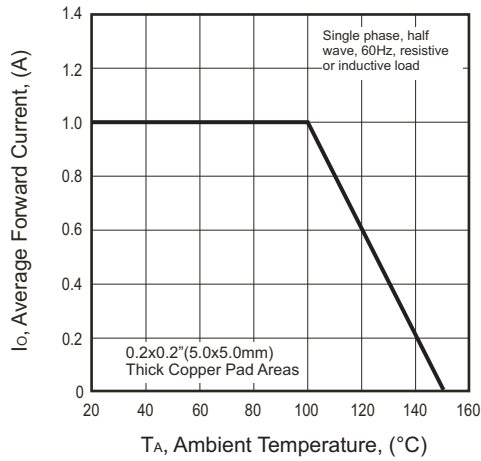


Fig.2- Forward Characteristics

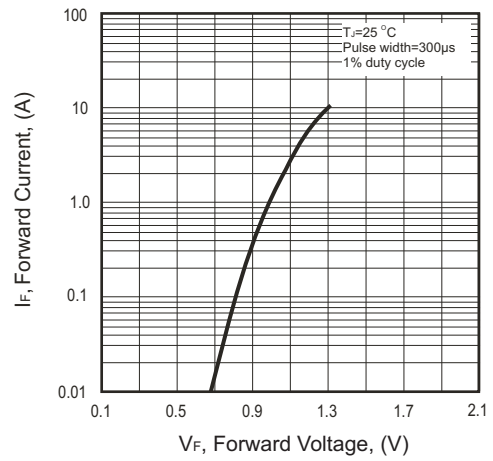


Fig.3- Non-repetitive Forward Surge Current

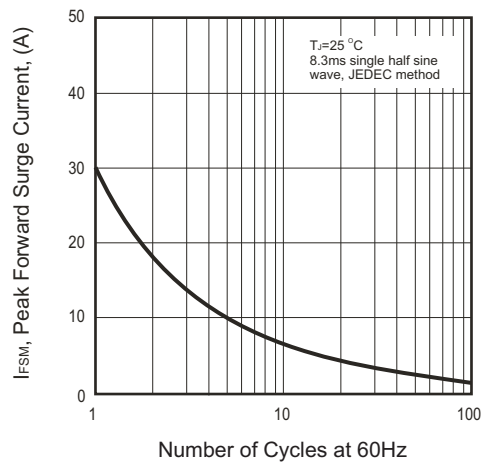


Fig.4- Reverse Characteristics

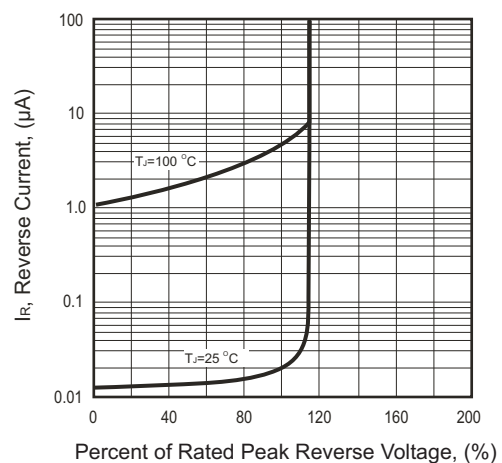
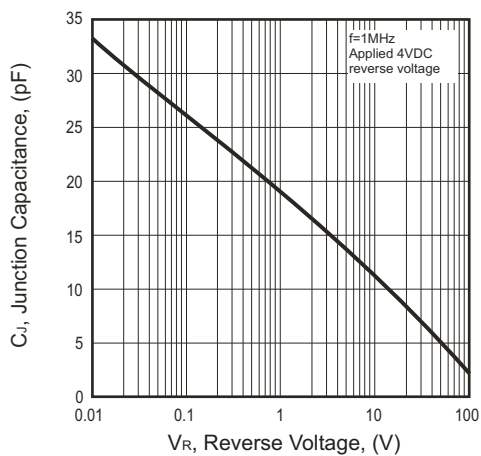


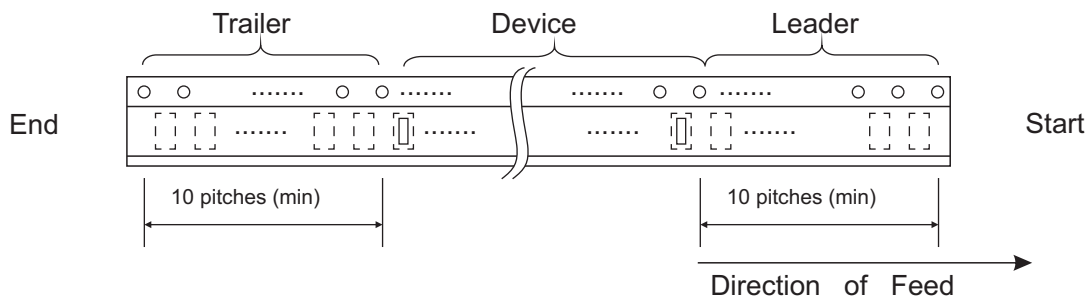
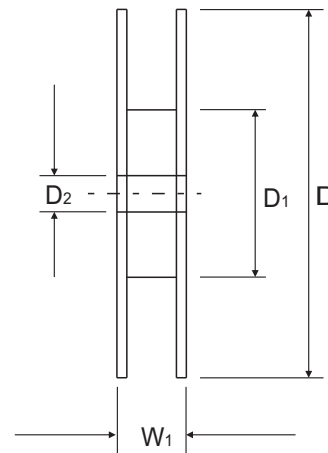
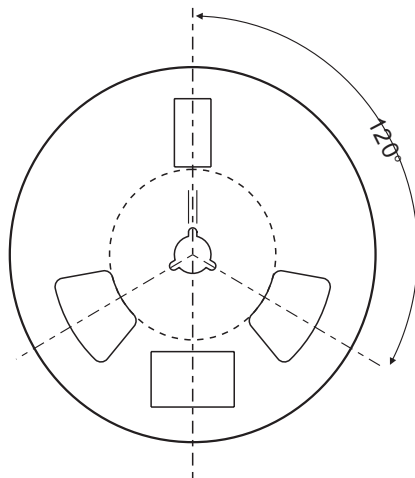
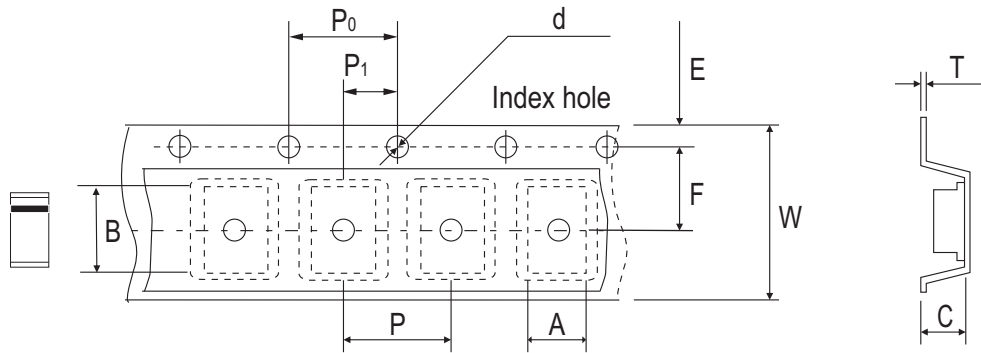
Fig.5- Junction Capacitance



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## Reel Taping Specification



KM/ SOD-123F	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.90 ± 0.10	3.90 ± 0.10	1.68 ± 0.10	1.50 ± 0.10	178 ± 2.00	62.0 MIN.	13.0 ± 0.50
	(inch)	0.075 ± 0.04	0.154 ± 0.04	0.066 ± 0.04	0.059 ± 0.004	7.00 ± 0.079	2.440 MIN.	0.512 ± 0.020

KM/ SOD-123F	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.10	8.00 ± 0.30	11.40 ± 1.0
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.004	0.315 ± 0.012	0.449 ± 0.004

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REV:G

## Marking Code

Part Number	Marking Code
CGRKM4001(T)-HF	A1
CGRKM4002(T)-HF	A2
CGRKM4003(T)-HF	A3
CGRKM4004(T)-HF	A4
CGRKM4005(T)-HF	A5
CGRKM4006(T)-HF	A6
CGRKM4007(T)-HF	A7

Note:

1) Suffix code after part number to specify packaging item .

Packaging	Code
REEL PACK 7"	NA
REEL PACK 13"	T

## Week Code

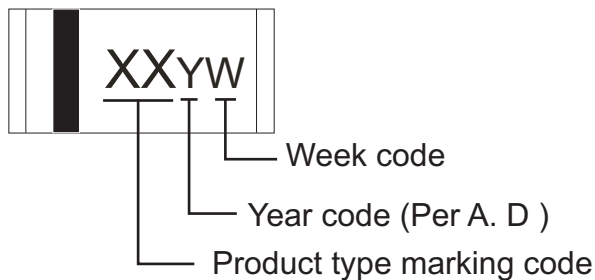
Week	Code	Week	Code	Week	Code	Week	Code
1	A	14	N	27	A	40	N
2	B	15	O	28	B	41	O
3	C	16	P	29	C	42	P
4	D	17	Q	30	D	43	Q
5	E	18	R	31	E	44	R
6	F	19	S	32	F	45	S
7	G	20	T	33	G	46	T
8	H	21	U	34	H	47	U
9	I	22	V	35	I	48	V
10	J	23	W	36	J	49	W
11	K	24	X	37	K	50	X
12	L	25	Y	38	L	51	Y
13	M	26	Z	39	M	52	Z

## Year Code

**Y = Year code (Per A. D )**  
 (2012: 2 , 2013: 3 , .....)

## Product code printed

### - From 1~26 Weeks

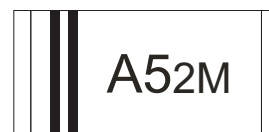


For example as follows:

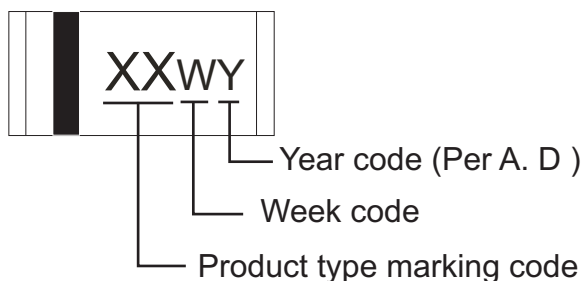
P/N: CGRKM4005-HF

Manufacture date\_Year: 2012 / Week:13

Product code printed: A52M



### - From 27~52 Weeks



For example as follows:

P/N: CGRKM4005-HF

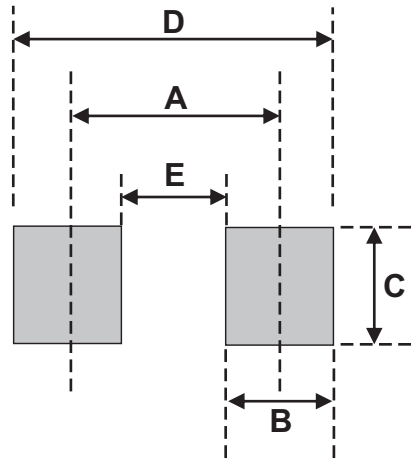
Manufacture date\_Year: 2012 / Week: 39

Product code printed: A5M2



## Suggested PAD Layout

SIZE	KM/SOD-123F	
	(mm)	(inch)
A	3.30	0.130
B	1.40	0.055
C	1.90	0.075
D	4.70	0.185
E	1.90	0.075





## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
KM/SOD-123F	2,500	7
	10,000	13

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-  [Comchip Technology Information](#)

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-  Excess Inventory Management