

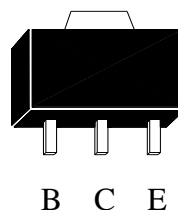
## NPN Epitaxial Planar Transistor

### Features

- High  $V_{CEO}$ ,  $V_{CEO}=80V$
- High  $I_c$ ,  $I_{c(DC)}=1A$
- Low  $V_{CE(sat)}$
- Good current gain linearity
- Complementary to KMB1198
- Pb-free lead plating and halogen-free package

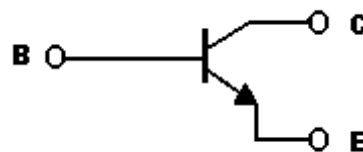
### Outline

SOT-89



### Symbol

KMD1768



B : Base  
 C : Collector  
 E : Emitter

### Ordering Information

Device	Package	Shipping
KMD1768	SOT-89 (Pb-free lead plating and halogen-free package)	1000 pcs / Tape & Reel

### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V <sub>CB0</sub>	100	V
Collector-Emitter Voltage	V <sub>CEO</sub>	80	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current (DC)	I <sub>C</sub>	1	A
Collector Current (Pulse)	I <sub>CP</sub>	2 (Note 1)	A
Power Dissipation	P <sub>d</sub>	0.6	W
		1 (Note 2)	W
		2 (Note 3)	W
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	208	°C/W
		125 (Note 2)	°C/W
		62.5 (Note 3)	°C/W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55~+150	°C

Note : 1. Single Pulse P<sub>w</sub> ≤ 350μs, Duty ≤ 2%.

2. When mounted on FR-4 PCB with area measuring 10×10×1 mm

3. When mounted on ceramic with area measuring 40×40×1 mm

### Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV <sub>CB0</sub>	100	-	-	V	I <sub>C</sub> =50μA, I <sub>E</sub> =0
BV <sub>CEO</sub>	80	-	-	V	I <sub>C</sub> =1mA, I <sub>B</sub> =0
BV <sub>EBO</sub>	5	-	-	V	I <sub>E</sub> =50μA, I <sub>C</sub> =0
I <sub>CB0</sub>	-	-	1	μA	V <sub>CB</sub> =80V, I <sub>E</sub> =0
I <sub>EBO</sub>	-	-	1	μA	V <sub>EB</sub> =4V, I <sub>C</sub> =0
*V <sub>CE(sat)</sub>	-	-	0.3	V	I <sub>C</sub> =500mA, I <sub>B</sub> =20mA
*h <sub>FE</sub>	180	-	390	-	V <sub>CE</sub> =3V, I <sub>C</sub> =100mA
f <sub>T</sub>	-	100	-	MHz	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=100MHz
C <sub>ob</sub>	-	20	-	pF	V <sub>CB</sub> =10V, f=1MHz

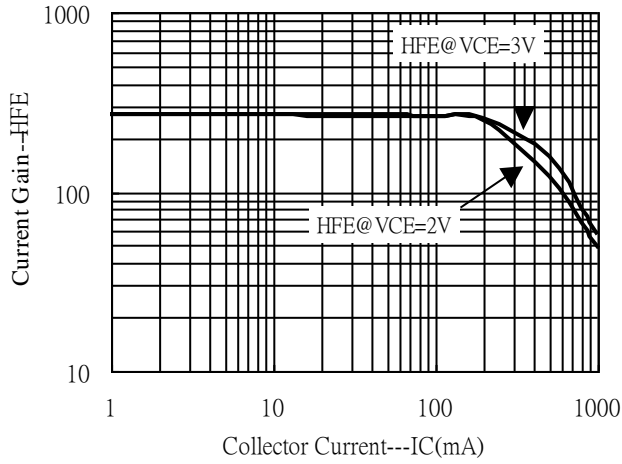
\*Pulse Test : Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

### Classification Of hFE

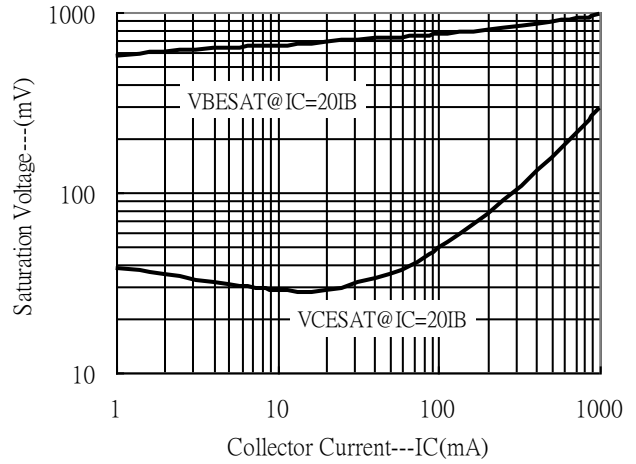
Rank	R
Range	180~390

## Typical Characteristics

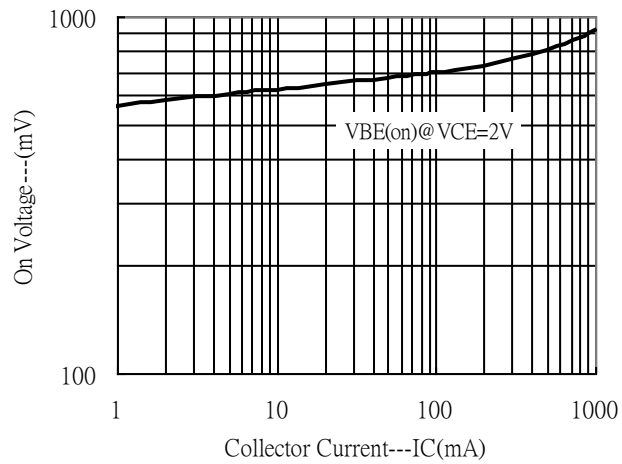
Current Gain vs Collector Current



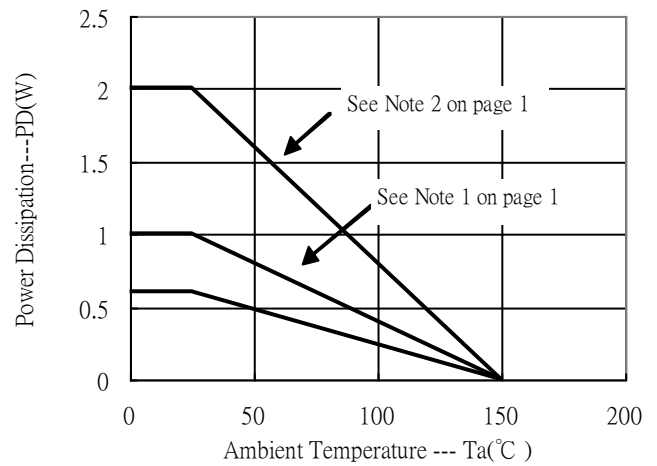
Saturation Voltage vs Collector Current



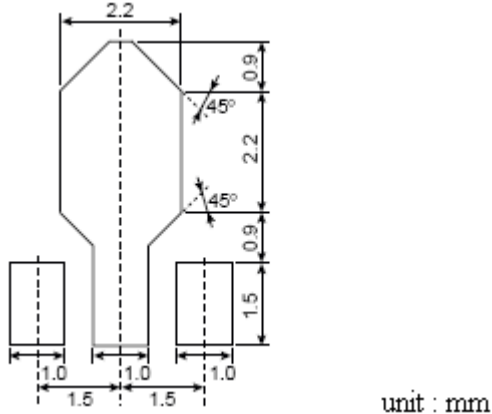
On Voltage vs Collector Current



Power Derating Curves

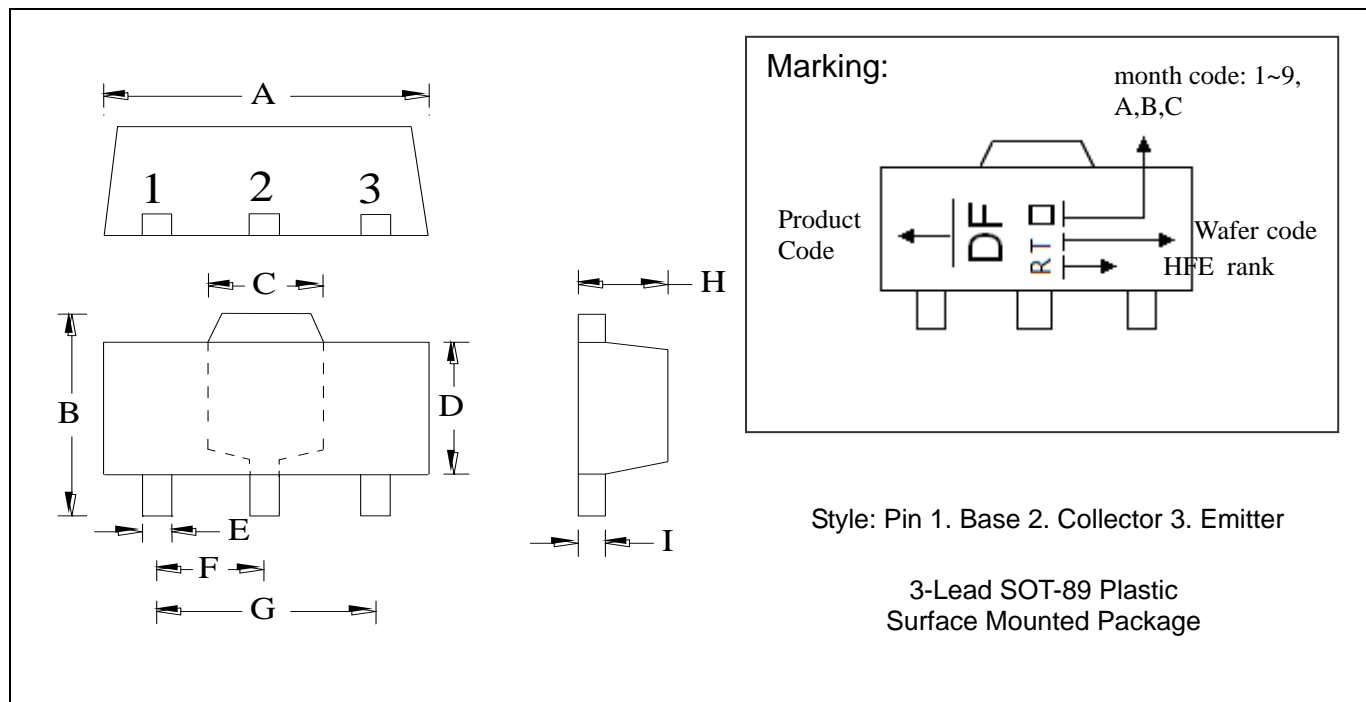


## Recommended soldering footprint





### SOT-89 Dimension



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1732	0.1811	4.40	4.60	F	0.0591	TYP	1.50	TYP
B	0.1551	0.1673	3.94	4.25	G	0.1181	TYP	3.00	TYP
C	0.0610	REF	1.55	REF	H	0.0551	0.0630	1.40	1.60
D	0.0906	0.1024	2.30	2.60	I	0.0138	0.0173	0.35	0.44
E	0.0126	0.0205	0.32	0.52					