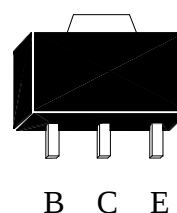


Silicon PNP Epitaxial Planar Transistor

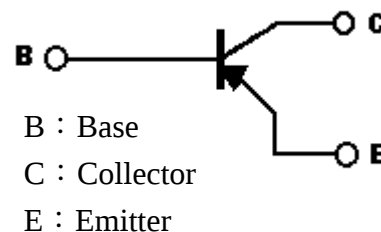
Description:

- Low saturation voltage, $V_{CE(SAT)} = -0.2V(\text{max.})$ at $I_C/I_B = -1A/-50mA$.
- High current capability.
- Excellent DC current gain characteristics.
- Pb-free lead plating and halogen-free package.

SOT-89



BV_{CEO}	-50V
I_C	-3A
$V_{CESAT}(\text{Max})$	-0.2V



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-7	V
Collector Current (DC)	I_C	-3	A
Collector Current (Pulse)	I_{CP}	-5 (Note 1)	A
Base Current (DC)	I_B	-0.2	A
Power Dissipation	P_D	0.5	W
		1 (Note 2)	W
		2 (Note 3)	W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	250	$^\circ\text{C/W}$
		125 (Note 2)	$^\circ\text{C/W}$
		62.5 (Note 3)	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_j	-55~+150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~+150	$^\circ\text{C}$

Note : 1. Single Pulse $P_w \leq 300\mu\text{s}$, Duty $\leq 2\%$.

2. When mounted on FR-4 PCB with area measuring $10 \times 10 \times 1 \text{ mm}$.

3. When mounted on ceramic with area measuring $40 \times 40 \times 1 \text{ mm}$

Ordering Information

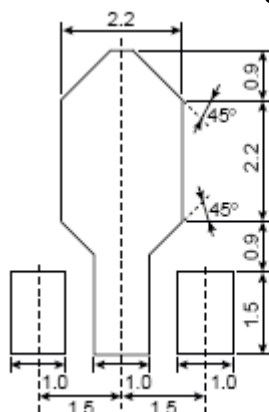
Device	Package	Shipping
KMA1797	SOT-89 (Pb-free lead plating and halogen-free package)	1000 pcs / Tape & Reel

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-50	-	-	V	$I_C = -50\mu A, I_E = 0$
BV_{CEO}	-50	-	-	V	$I_C = -1mA, I_B = 0$
BV_{EBO}	-7	-	-	V	$I_E = -50\mu A, I_C = 0$
I_{CBO}	-	-	-100	nA	$V_{CB} = -50V, I_E = 0$
I_{EBO}	-	-	-100	nA	$V_{EB} = -7V, I_C = 0$
$*V_{CE(sat)}$	-	-0.1	-0.2	V	$I_C = -1A, I_B = -50mA$
$*V_{CE(sat)}$	-	-0.19	-0.5	V	$I_C = -2A, I_B = -100mA$
$*V_{BE(sat)}$	-	-0.85	-1.2	V	$I_C = -1A, I_B = -50mA$
$*V_{BE(on)}$	-	-0.78	-1	V	$V_{CE} = -2V, I_C = -1A$
h_{FE1}	180	-	-	-	$V_{CE} = -2V, I_C = -20mA$
h_{FE2}	200	-	400	-	$V_{CE} = -2V, I_C = -500mA$
h_{FE3}	120	-	-	-	$V_{CE} = -2V, I_C = -1A$
f_T	-	180	-	MHz	$V_{CE} = -2V, I_C = -300mA$
C_{ob}	-	24	-	pF	$V_{CB} = -10V, I_E = 0, f = 1MHz$

*Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

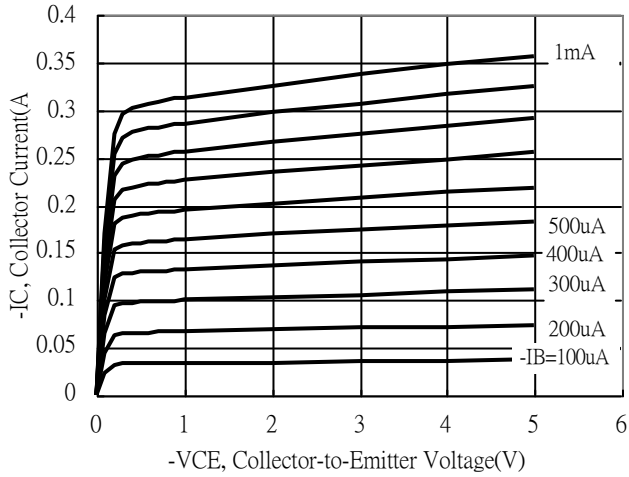
Recommended soldering footprint



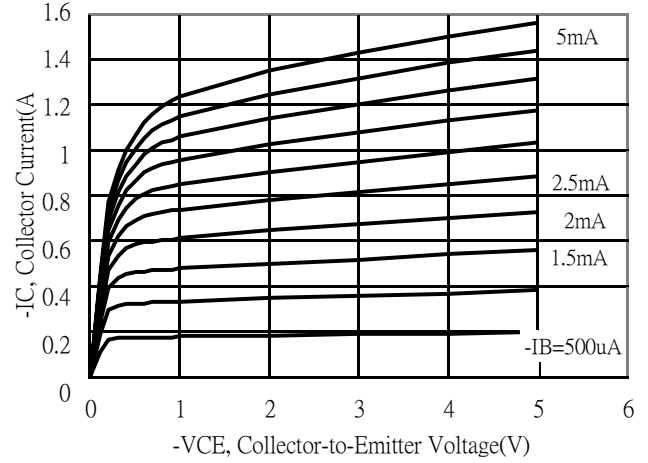
unit : mm

Typical Characteristics

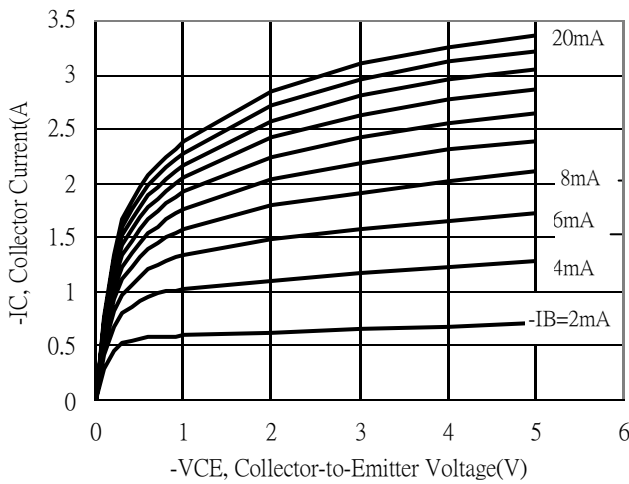
Emitter Grounded Output Characteristics



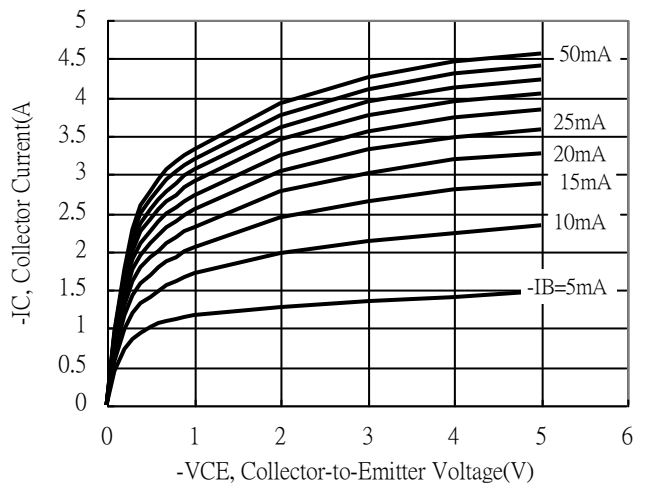
Emitter Grounded Output Characteristics



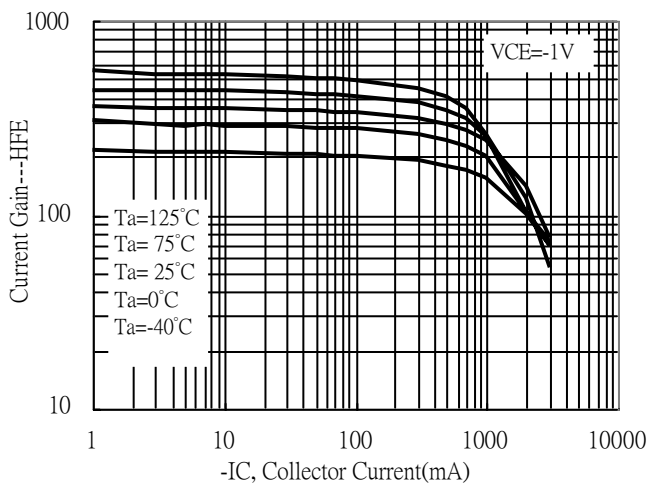
Emitter Grounded Output Characteristics



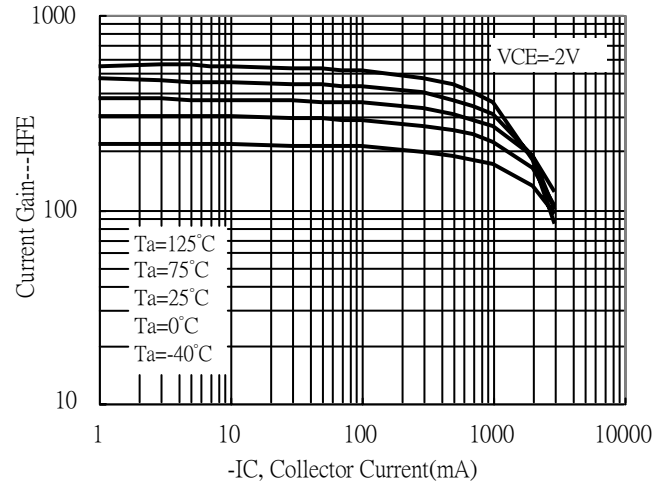
Emitter Grounded Output Characteristics



Current Gain vs Collector Current

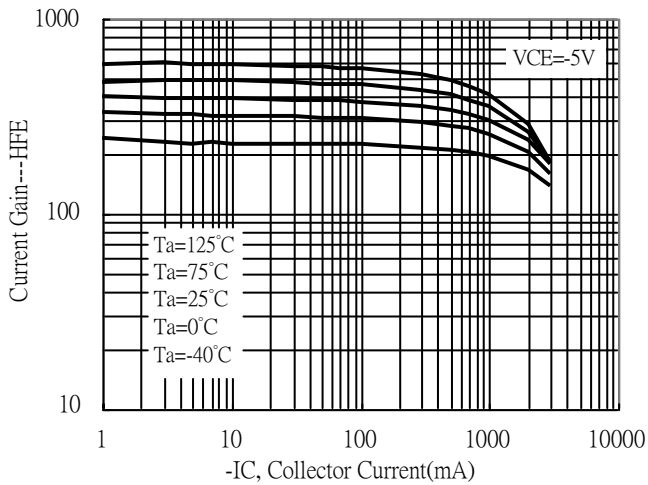


Current Gain vs Collector Current

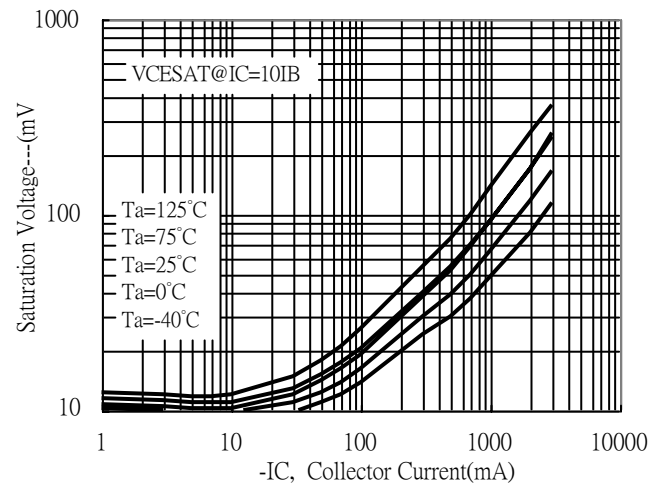


Typical Characteristics(Cont.)

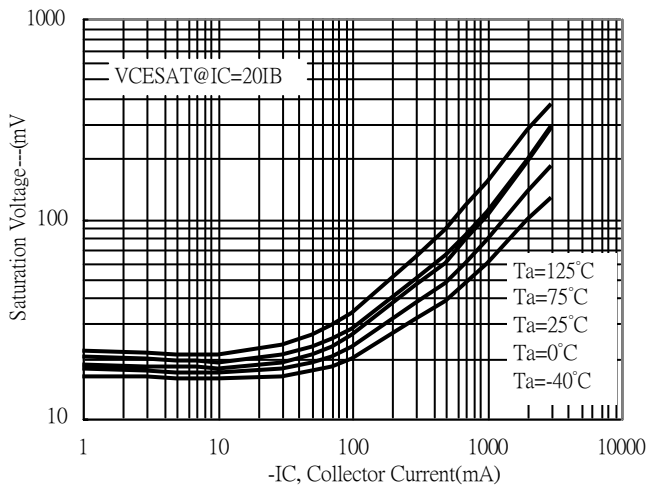
Current Gain vs Collector Current



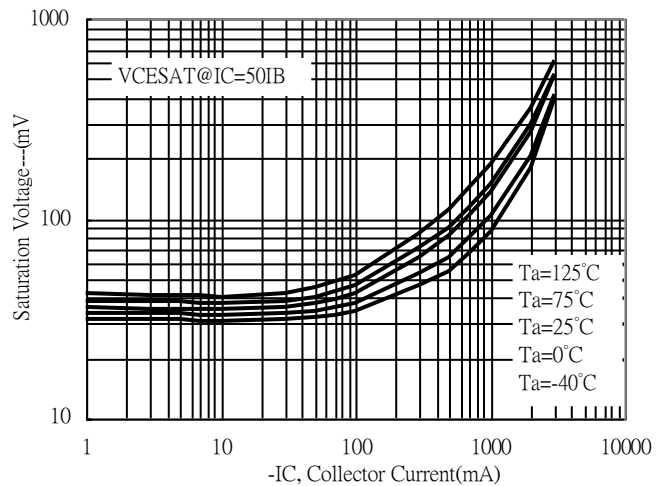
Saturation Voltage vs Collector Current



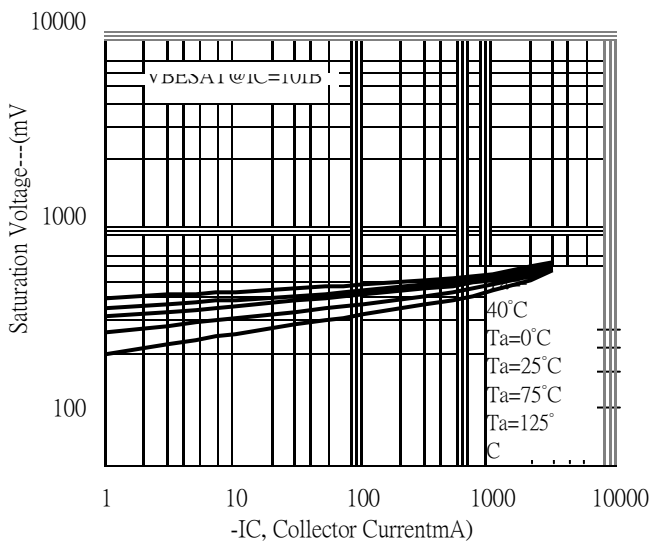
Saturation Voltage vs Collector Current



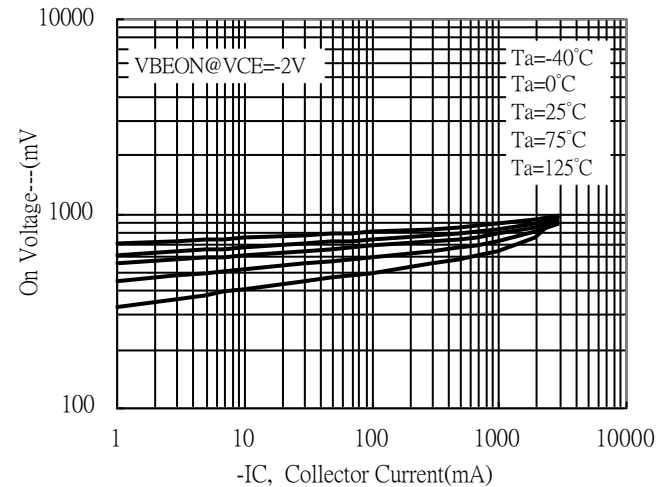
Saturation Voltage vs Collector Current



Saturation Voltage vs Collector Current

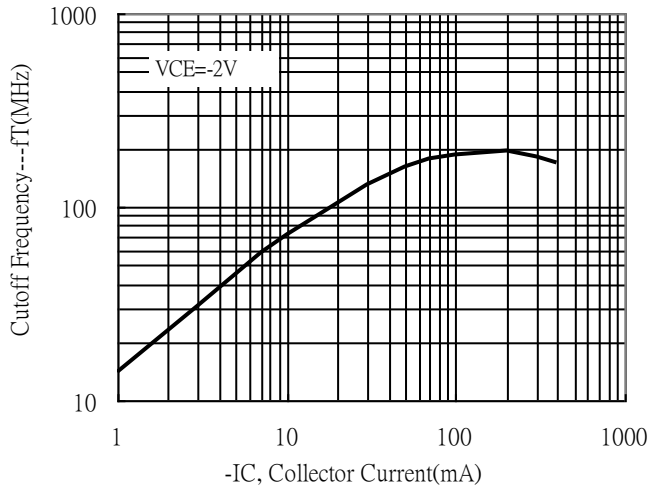


On Voltage vs Collector Current

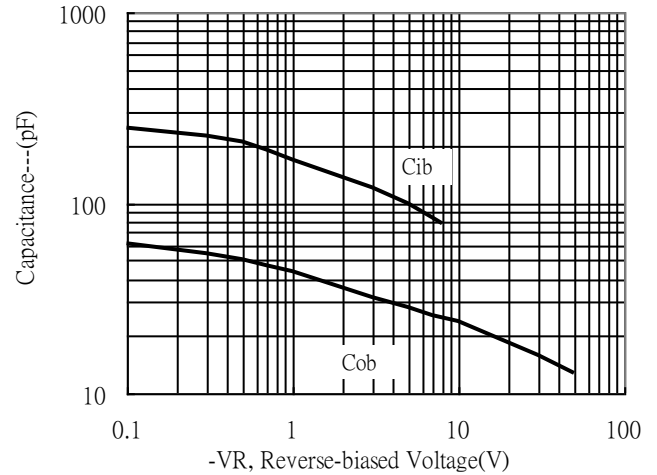


Typical Characteristics(Cont.)

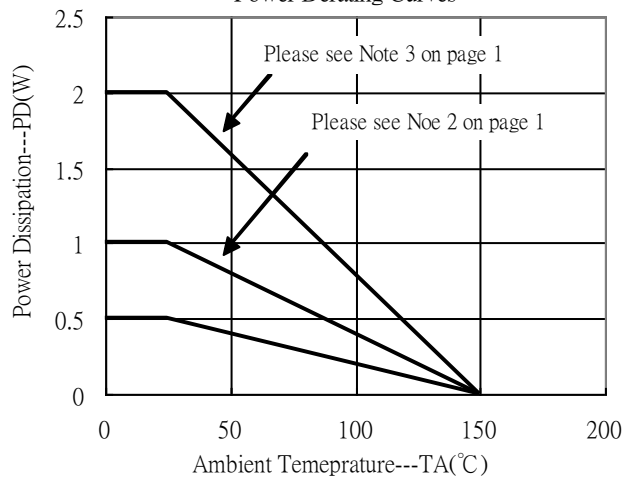
Cutoff Frequency vs Collector Current



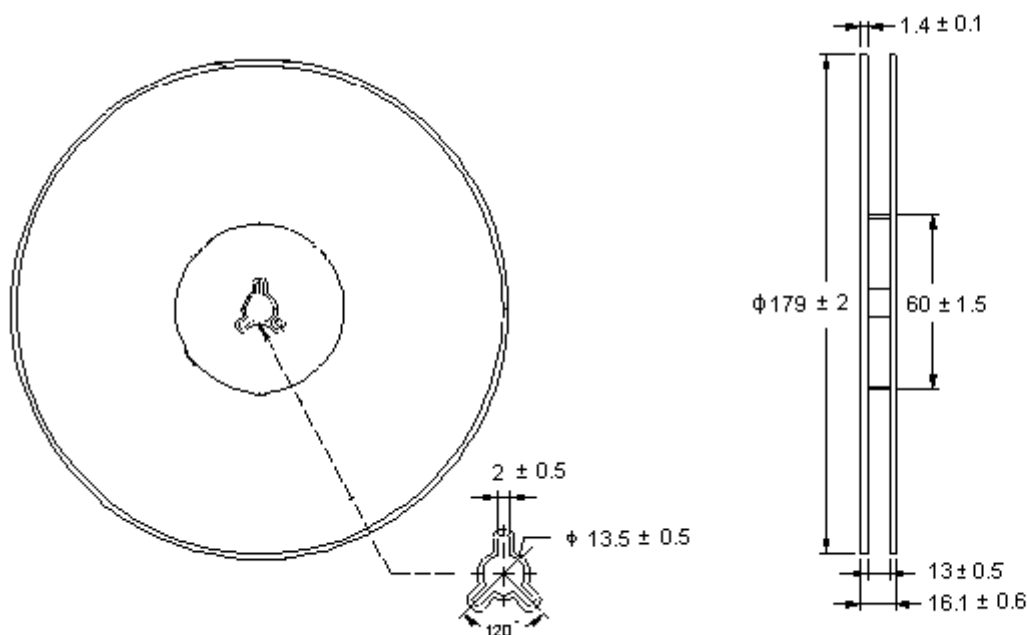
Capacitance vs Reverse-biased Voltage



Power Derating Curves

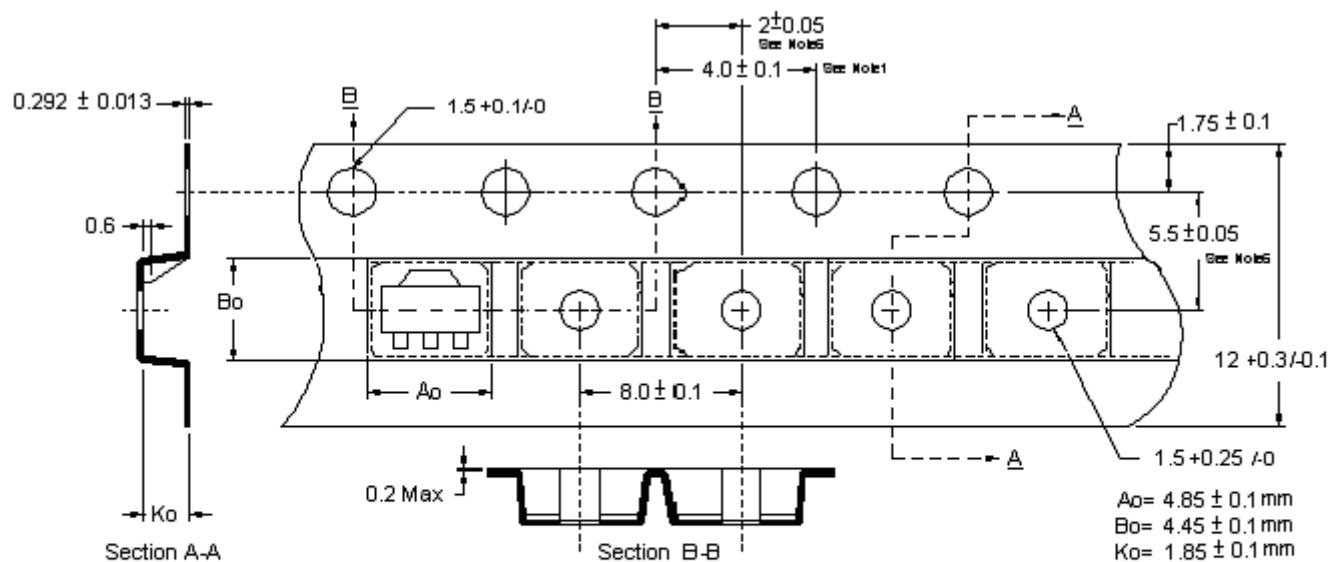


Reel Dimension



Unit: millimeter

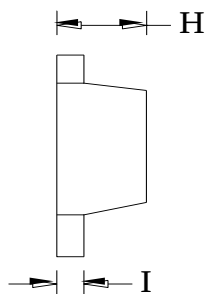
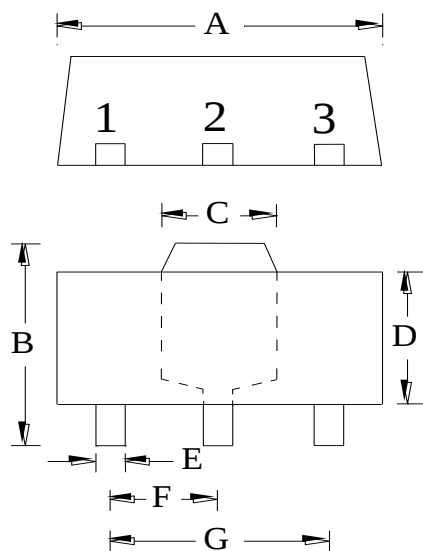
Carrier Tape Dimension



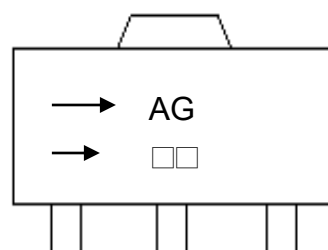
Unit : millimeter

SOT-89 Dimension

Marking:



Device
Code
Date Code



Style: Pin 1. Base 2. Collector 3. Emitter

3-Lead SOT-89 Plastic
Surface Mounted Package

*: 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					