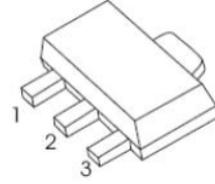




FEATURES

Excellent hFE linearity and high hFE

hFE = 60 to 400 ($V_{CE} = 2\text{ V}$, $I_C = 3\text{ A}$)



1.Base
2.Collector
3.Emitter

■ Simplified outline(SOT-89)

D882

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Power Dissipation	0.5	W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~150	°C

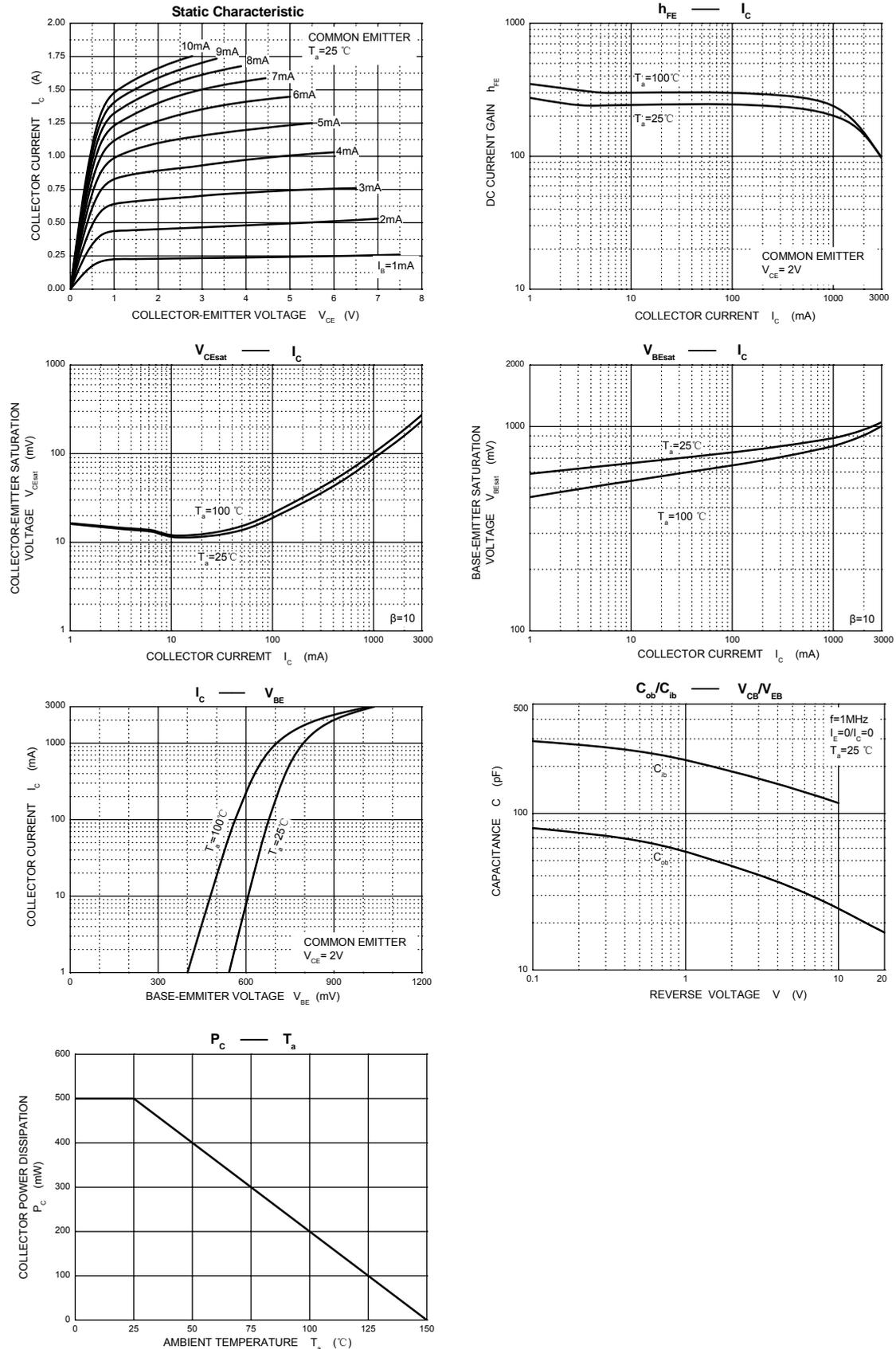
Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$			1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 30\text{V}, I_B = 0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 6\text{V}, I_C = 0$			1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 2\text{V}, I_C = 1\text{A}$	60		400	
	$h_{FE(2)}$	$V_{CE} = 2\text{V}, I_C = 100\text{mA}$	32			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2\text{A}, I_B = 0.2\text{A}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 2\text{A}, I_B = 0.2\text{A}$			1.5	V
Transition frequency	f_T	$V_{CE} = 5\text{V}, I_C = 0.1\text{A}$ $f = 10\text{MHz}$	50			MHz

CLASSIFICATION OF $h_{FE(1)}$

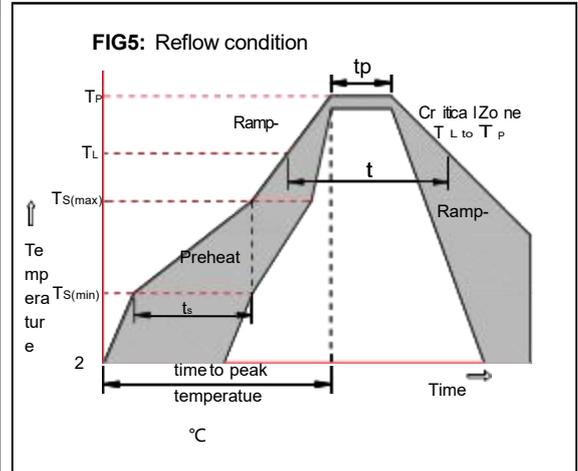
Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

RATING AND CHARACTERISTIC CURVES



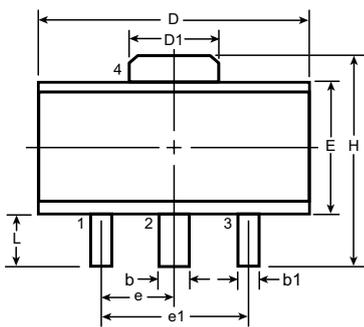
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

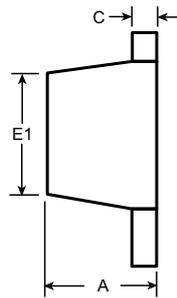


Package Dimensions & Suggested Pad Layout

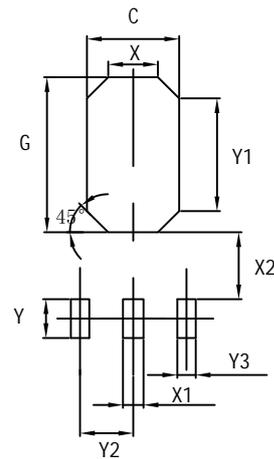
SOT89



Top View



Side View

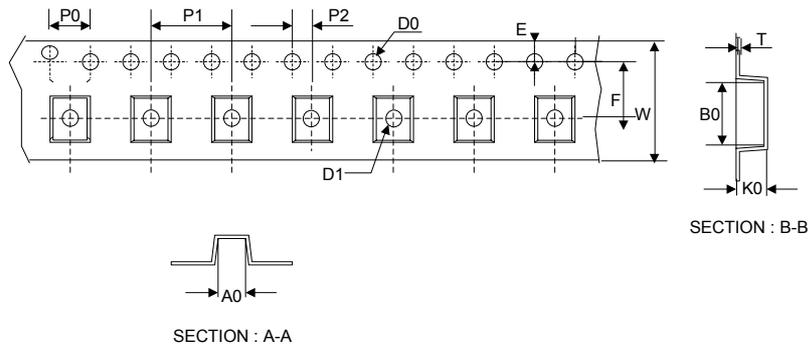


Symbol	A	b	b1	C	D	D1	E	E1	e	e1	H	L
Dimensions (mm)	MIN	1.40	0.44	0.38	0.3	4.40	1.50	2.29	2.00	1.50	3.94	0.89
	NOM	-	-	-	-	-	-	-	BSC	BSC	-	-
	MAX	1.60	0.56	0.48	0.5	4.60	1.75	2.60	2.29	-	4.25	1.20

Dimensions	Value (in mm)
C	2.50
G	3.60
X	1.40
X1	0.90
X2	0.90
Y	1.40
Y1	2.60
Y2	1.50
Y3	0.90

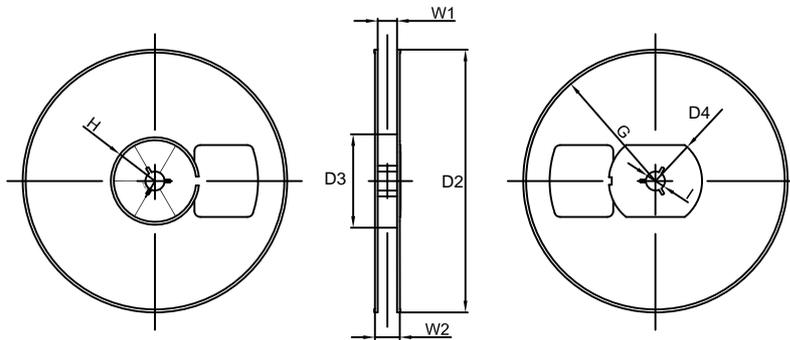
Tape & reel specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	8.00±0.20
P2	2.00±0.20
D0	1.60±0.20
D1	1.60±0.20
E	1.75±0.20
F	7.50±0.15
W	16.00±0.20
A0	6.30±0.20
B0	8.25±0.20
K0	2.60±0.20
T	0.23±0.10
D2	180.0±5.0
D3	60Min.
D4	R32.0±2.0
G	R86.5±2.0
H	R30.0±2.0
I	13.0±2.0
W1	13.20±2.0
W2	16.50±2.0

13" Reel



Quantity: 1000PCS