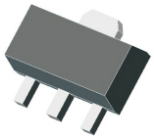
General Purpose Transistor

CJA606PL-HF (PNP)

RoHS Device
Halogen Free

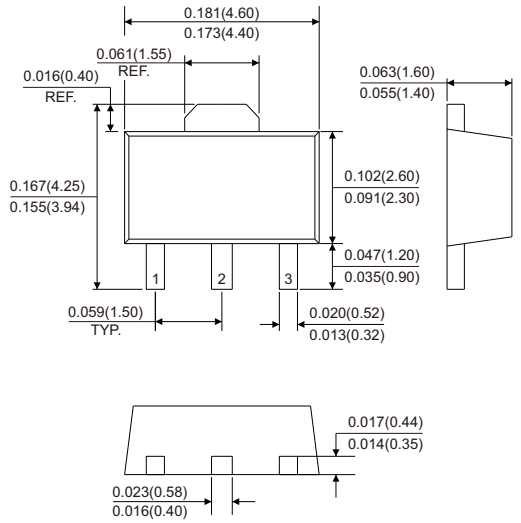


Features

- Low saturation voltage.
- High speed switching.

SOT-89-3L

1 : Base
2 : Collector
3 : Emitter

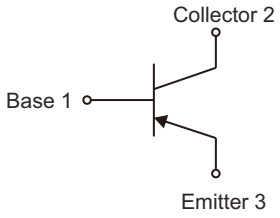


Dimensions in inches and (millimeter)

Mechanical data

- Case: SOT-89-3L, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

Circuit Diagram



Maximum Ratings (at TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	-100	V
Collector-emitter voltage	V_{CEO}	-60	V
Emitter-base voltage	V_{EBO}	-7	V
Continuous current	I_C	-6	A
Collector power dissipation (Note 1)	P_C	1.5	W
Thermal resistance from junction to ambient (Note 1)	$R_{\theta JA}$	83.3	°C/W
Operation junction and storage temperature range	T_J, T_{STG}	-55 to +150	°C

Note: 1. Device mounted on 1 in² FR-4 board with 2oz. single-sided copper, in a still air environment with T_A=25°C.

Electrical Characteristics (at T_A=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-base breakdown voltage	I_C = -0.1mA, I_E = 0	$V_{(BR)CBO}$	-100			V
Collector-emitter breakdown voltage	I_C = -10mA, I_B = 0	$V_{(BR)CEO}$	-60			V
Emitter-base breakdown voltage	I_E = -0.1mA, I_C = 0	$V_{(BR)EBO}$	-7			V
Collector cut-off current	V_{CB} = -80V, I_E = 0	I_{CBO}			-20	nA
Emitter cut-off current	V_{EB} = -6V, I_C = 0	I_{EBO}			-10	nA
DC current gain	V_{CE} = -1V, I_C = -10mA	h_{FE}	100			
	V_{CE} = -1V, I_C = -2A		100		300	
	V_{CE} = -1V, I_C = -5A		45			
	V_{CE} = -1V, I_C = -10A		10			
Collector-emitter saturation voltage	I_C = -100mA, I_B = -10mA	$V_{CE(sat)}$			-20	mV
	I_C = -1A, I_B = -100mA				-65	
	I_C = -2A, I_B = -200mA				-150	
	I_C = -5A, I_B = -500mA				-280	
Base-emitter saturation voltage	I_C = -5A, I_B = -50mA	$V_{BE(sat)}$			-1.15	V
Base-emitter on voltage	I_C = -5A, V_{CE} = -1V	$V_{BE(on)}$			-1	V
Collector output capacitance	V_{CB} = -10V, I_E = 0, f = 1MHz	C_{ob}		65		pF
Transition frequency	V_{CE} = -10V, I_C = -0.1A, f = 100MHz	f_T	30			MHz

Typical Rating and Characteristic Curves (CJA606PL-HF)

Fig.1 - Static Characteristic

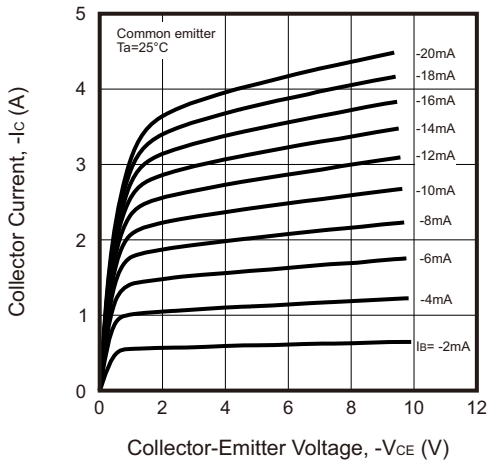
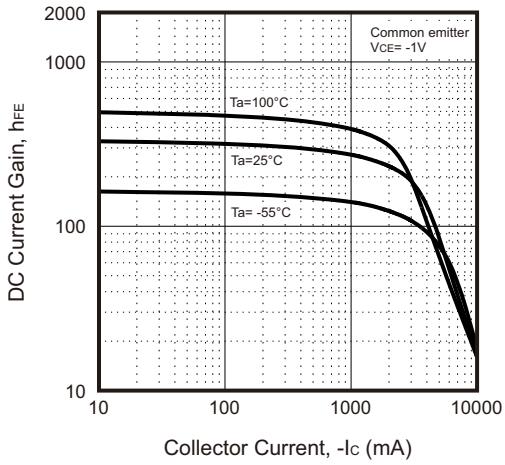


Fig.2 - h_{FE} — I_C



Typical Rating and Characteristic Curves (CJA606PL-HF)

Fig.3 - V_{BEsat} — I_C

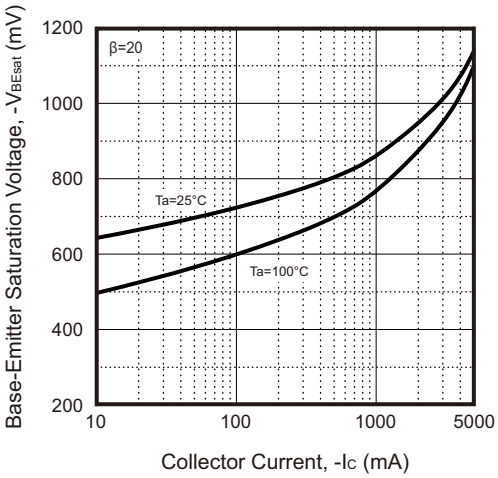


Fig.4 - V_{CEsat} — I_C

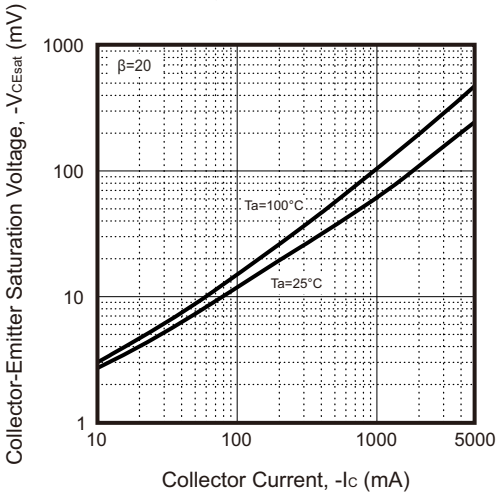


Fig.5 - I_C — V_{BE}

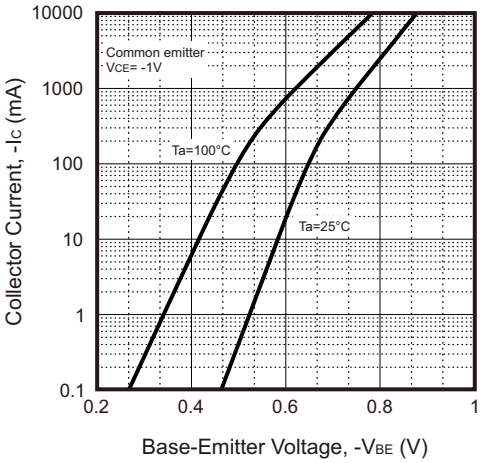


Fig.6 - C_{ob}/C_{ib} — V_{CB}/V_{EB}

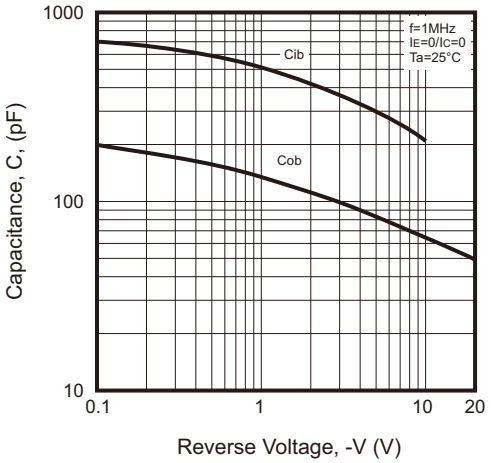


Fig.7 - P_C — T_a

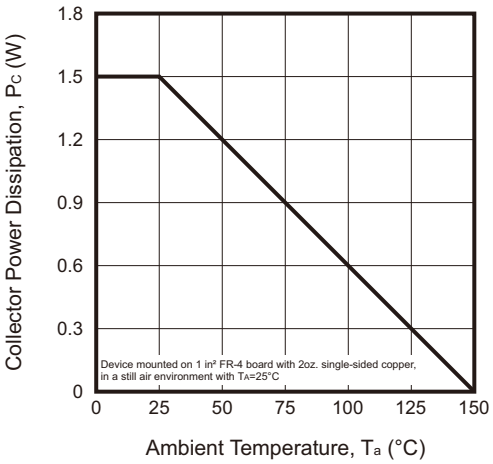
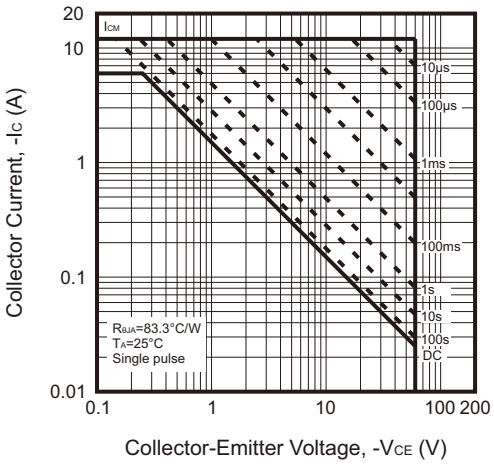
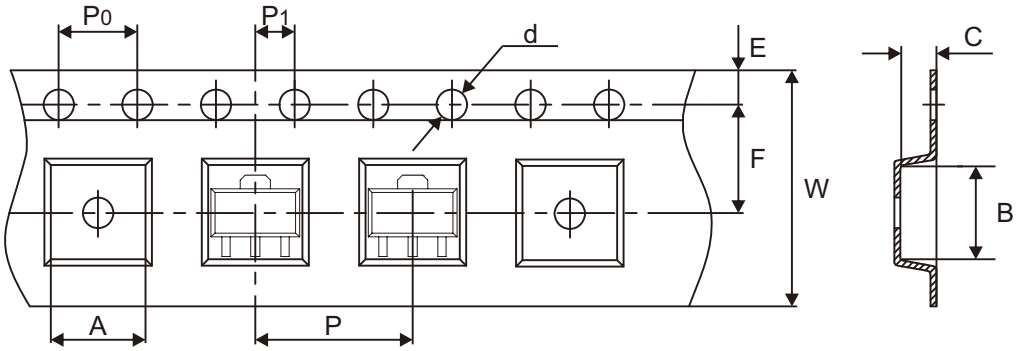
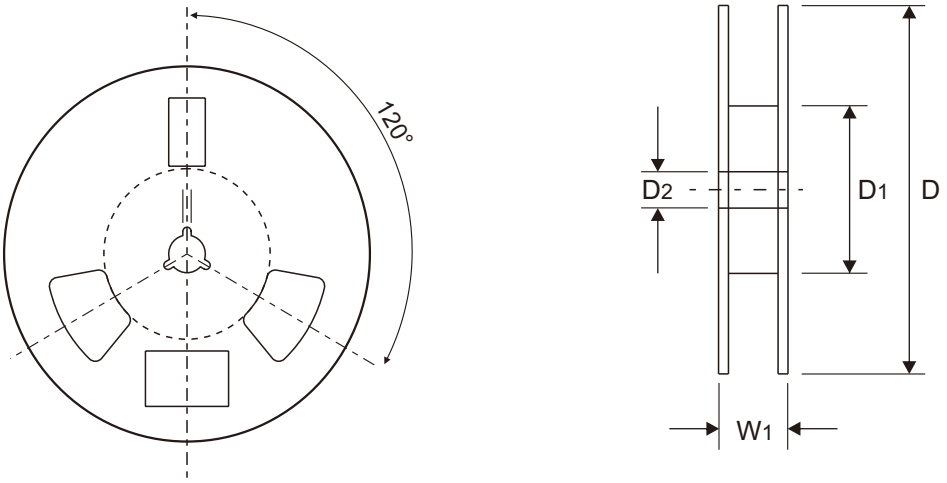


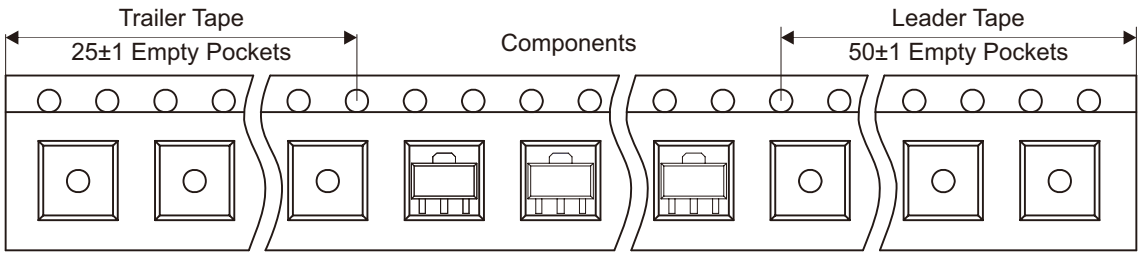
Fig.8 - Maximum Forward Biased Safe Operating Area



Reel Taping Specification





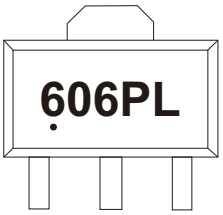


	SYMBOL	A	B	C	d	D	D1	D2
SOT-89-3L	(mm)	4.85 ± 0.10	4.45 ± 0.10	1.85 ± 0.10	1.50 + 0.10 − 0.00	180.00 ± 1.00	60.00 ± 1.50	13.20 ± 0.20
	(inch)	0.191 ± 0.004	0.175 ± 0.004	0.073 ± 0.004	0.059 + 0.004 − 0.000	7.087 ± 0.039	2.362 ± 0.059	0.520 ± 0.008

	SYMBOL	E	F	P	P0	P1	W	W1
SOT-89-3L	(mm)	1.75 ± 0.10	5.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	12.00 + 0.30 − 0.10	16.50 + 2.00 − 1.00
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.472 + 0.012 − 0.004	0.650 + 0.079 − 0.039

Marking Code

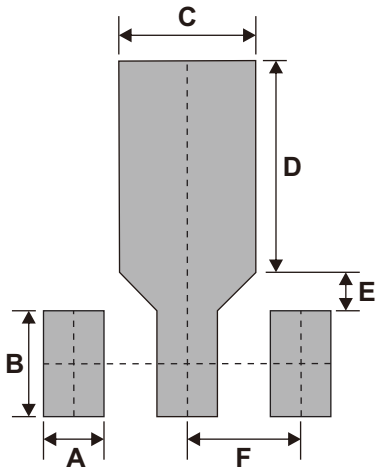
Part Number	Marking Code
CJA606PL-HF	606PL



xx = Product type marking code
Solid dot = Control code

Suggested P.C.B. PAD Layout

SIZE	SOT-89-3L	
	(mm)	(inch)
A	0.80	0.031
B	1.40	0.055
C	1.80	0.071
D	2.80	0.110
E	0.50	0.020
F	1.50	0.059



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-89-3L	1,000	7