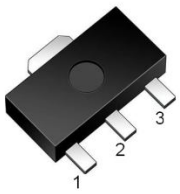
REPLACEMENT TYPE : FCX591

FEATURES

- Power Dissipation



SOT-89 MARKING:P1

1:BASE 2:COLLECTOR 3:EMITTER

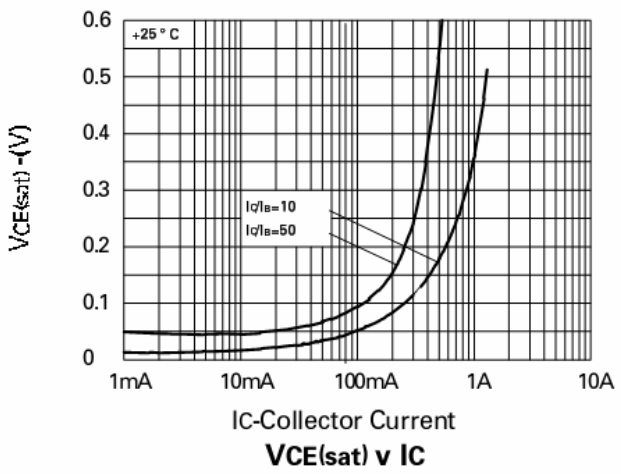
MAXIMUM RATINGS (T_A= 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-80	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-1	A
Collector Power Dissipation	P_C	0.5	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-65~150	°C

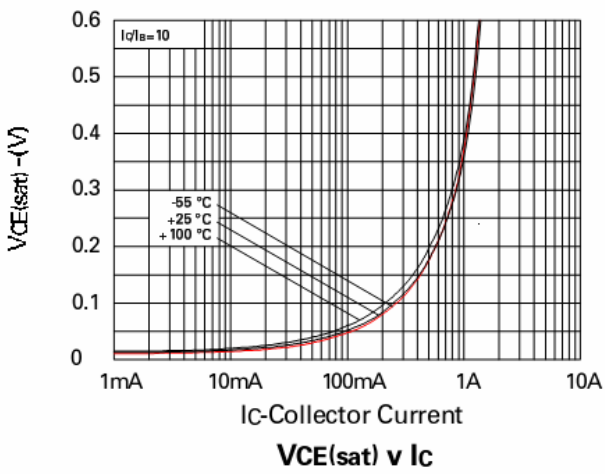
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V_{CBO}	I_C=-100uA,I_E=0	-80			V
Collector-Emitter Breakdown Voltage	V_{CEO}	I_C=-10mA,I_B=0	-60			V
Emitter-Base Breakdown Voltage	V_{EBO}	I_E=-100uA,I_C=0	-5			V
Collector Cut-off Current	I_{CBO}	V_{CB}=-60V,I_E=0			-0.1	uA
Emitter Cut-off Current	I_{EBO}	V_{EB}=-4V,I_C=0			-0.1	uA
Collector- Emitter Cut-off Current	I_{CES}	V_{CES}=-60 V, I_E=0			-0.1	uA
DC Current Gain(note)	$h_{FE(1)}$	V_{CE}=-5V,I_C=-1mA	100			
	$h_{FE(2)}$	V_{CE}=-5V,I_C=-500mA	100		300	
	$h_{FE(3)}$	V_{CE}=-5V,I_C=-1A	80			
	$h_{FE(4)}$	V_{CE}=-5V,I_C=-2A	15			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-500mA,I_B=-50mA			-0.3	V
		I_C=-1A,I_B=-100mA			-0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=-1A,I_B=-100mA			-1.2	V
Base-Emitter Voltage	V_{BE}	V_{CE}=-5V, I_C= -1A			-1	V
Collector Output Capacitance	C_{ob}	V_{CB}=-10V, f=1MHz			10	pF
Transition Frequency	f_T	V_{CE}=-10V,I_C=-50mA, f=1MHz	150			MHz

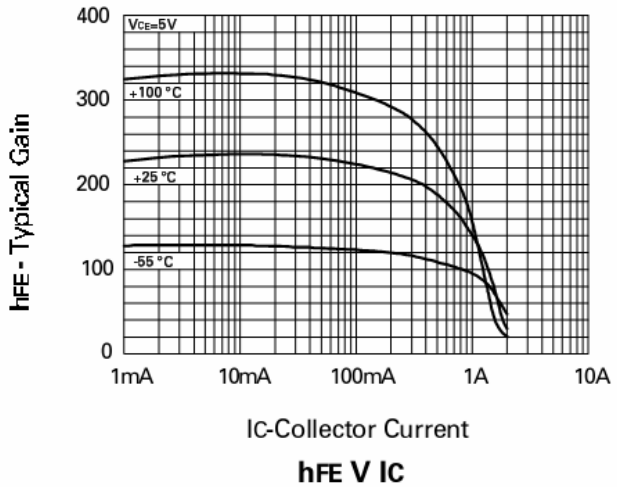
Typical Characteristics



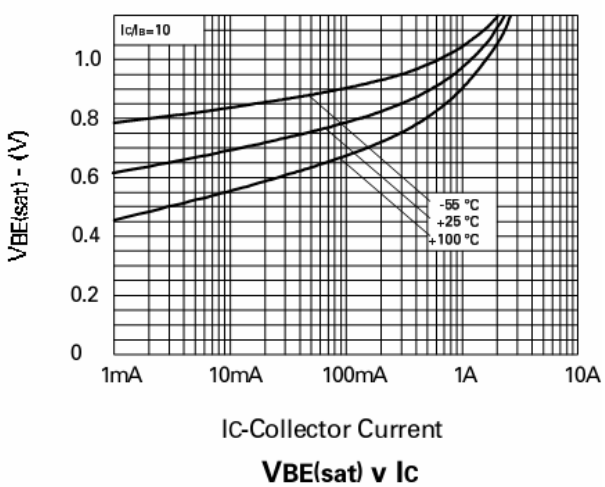
VCE(sat) v IC



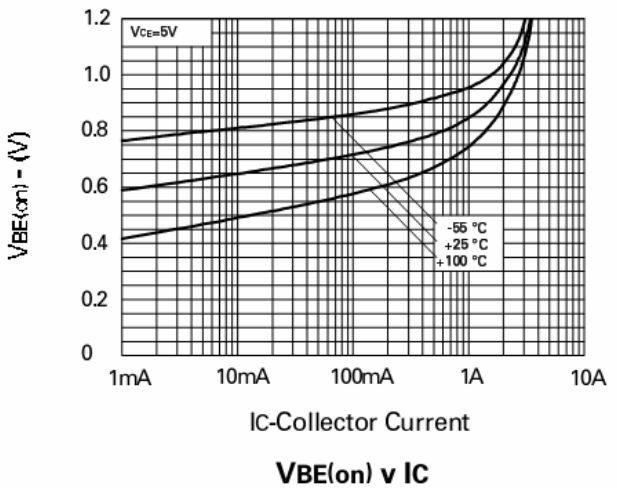
VCE(sat) v IC



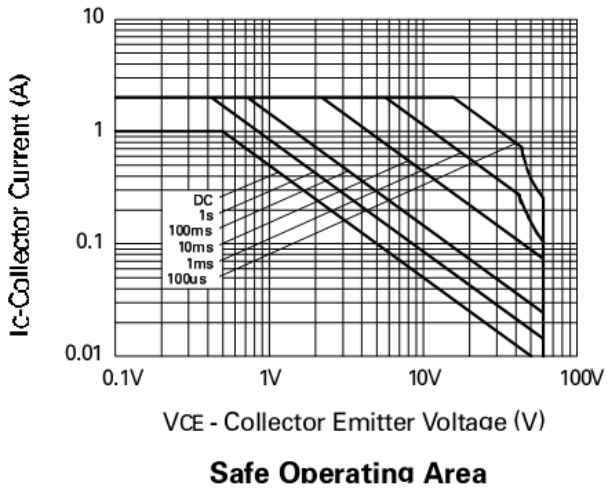
hFE V IC



VBE(sat) v IC

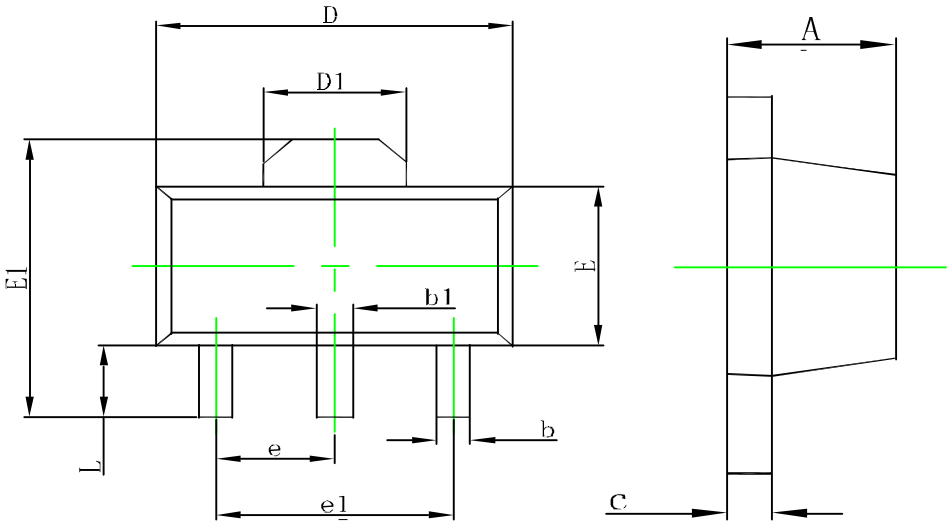


VBE(on) v IC



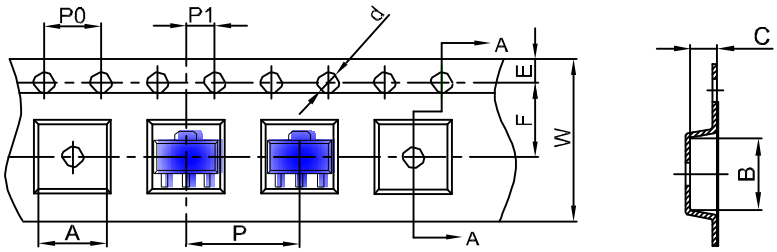
Safe Operating Area

SOT-89 Package Outline Dimensions



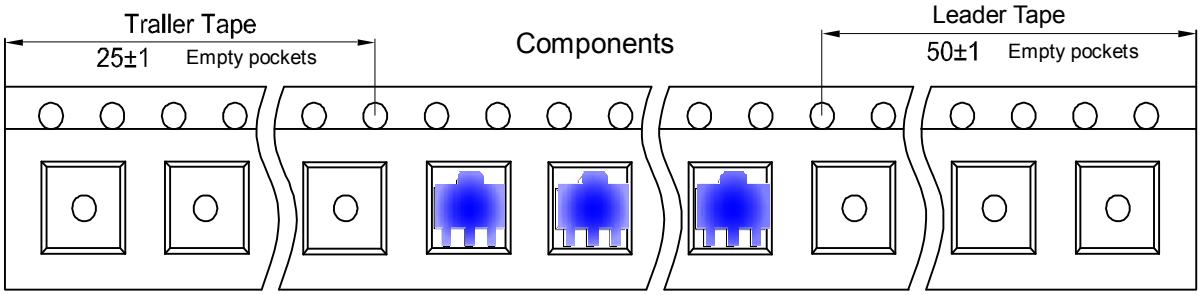
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550REF.		0.061REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500TYP.		0.060TYP.	
e1	3.000TYP.		0.118TYP.	
L	0.900	1.200	0.035	0.047

SOT-89 Tape and Reel

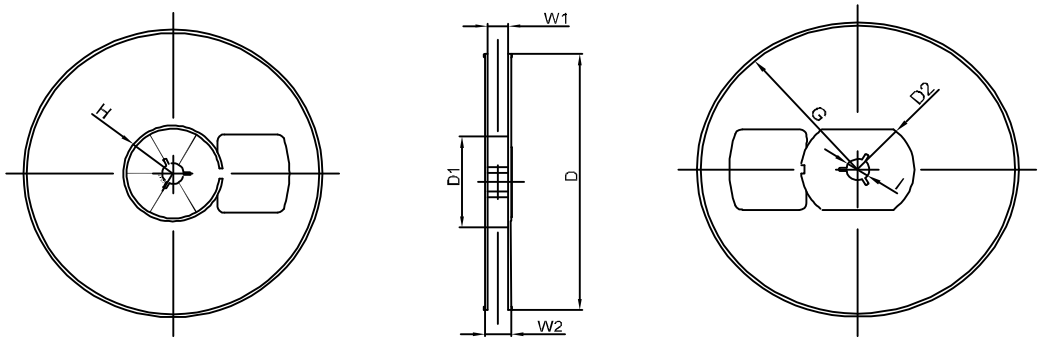


	DIMENSIONSAREINMILLIMETER									
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-89	4.85	4.45	1.85	ϕ1.50	1.75	5.50	4.00	8.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOT-89 Tape Leader and Trailer



SOT-89 Reel



	DIMNSIONSAREINMILLIMETERE							
REELOPTION	D	D1	D2	G	H	I	W1	W2
7” DIA	ϕ 180	60.00	R32.00	R86.50	R30.00	ϕ 13.00	13.20	16.50
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1