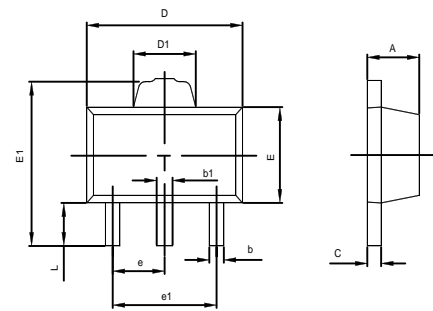


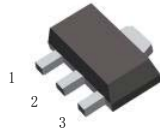
RoHS Compliant Product

SOT-89



Features

- NPN Silicon Epitaxial Planar Transistor for switching and amplifier applications.
- This transistor is also available in the TO-223 case with the type designation PZT2403



Mechanical Data

Case: SOT-89 Plastic Package

Weight: approx. 0.016g

Marking Code: 156

1. BASE
2. COLLECTOR
3. EMITTER

Maximum Ratings and Thermal Characteristics

(TA = 25°C unless otherwise noted)

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	0.360	0.560	0.014	0.022
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.400	1.800	0.055	0.071
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500TYP		0.060TYP	
e1	2.900	3.100	0.114	0.122
L	0.900	1.100	0.035	0.043

Parameter	Symbol	Value	Unit
Collector Base Voltage	V _{CBO}	80	V
Collector-Emitter Voltage	V _{CEO}	60	V
Emitter-Base Voltage	V _{EBO}	5.0	V
Collector Current (DC)	I _C	3	A
Collector Current (pulse)	I _C	6	
Power Dissipation at TA = 25°C	P _{tot}	1.0	W
Thermal Resistance Junction to Ambient Air	R _{θJA}	150 ⁽¹⁾	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _S	-55 to +150	°C

Notes: Device on alumina substrate.

f = 30MHz

Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	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
Emitter Cutoff Current	I _{EBO}	V _{CE} = 4V, I _C = 0	-	-	100	nA
Collector Cutoff Current	I _{CBO}	V _{CB} = 60V, I _E = 0	-	-	100	nA
Collector-emitter Saturation Voltage 1	V _{CE(sat)1}	I _C = 1A, I _B = 0.1A	-	0.12	0.2	V
Collector-emitter Saturation Voltage 2	V _{CE(sat)2}	I _C = 3A, I _B = 0.3A	-	0.43	0.6	V
Base-emitter Saturation Voltage	V _{BE(sat)}	I _C = 1A, I _B = 0.1A	-	0.9	1.25	V
Base-emitter xxx Voltage	V _{BE(on)}	I _C = 1A, V _{CE} = 2V	-	0.8	1.0	V
DC Current Gain 1	h _{FE1}	V _{CE} = 2V, I _C = 50 mA	70	200	-	
DC Current Gain 2	h _{FE2}	V _{CE} = 2V, I _C = 500 mA	100	200	300	
DC Current Gain 3	h _{FE3}	V _{CE} = 2V, I _C = 1 A	80	170	-	
DC Current Gain 4	h _{FE4}	V _{CE} = 2V, I _C = 2 A	40	80	-	
Gain-Bandwidth Product	f _T	V _{CE} = 5V, I _C = 100 mA f=100MHz	140	175	-	MHz
On-Time	t _{on}	V _{CC} = 10V, I _C = 500 mA	-	45	-	ns
Off-Time	t _{off}	I _{B1} = I _{B2} = 50mA	-	800	-	
Output Capacitance	C _{ob}	V _{CB} = 10V, f = 2 MHz	-	-	30	pF

