

RoHS Compliant Product

Features

- 5 Amps continuous current, up to 10 Amp peak current.
- Excellent gain characteristic specified up to 10Amps.
- Very low saturation voltage

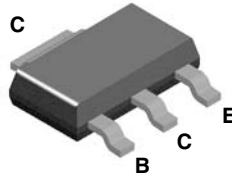
Mechanical Data

Case: SOT-223 Plastic Package

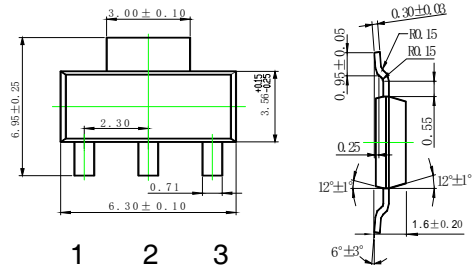
Weight: approx. 0.021g

Marking Code: 359

XXXX
(xxxx = date code)



SOT-223



1. BASE
2. COLLECTOR
3. EMITTER

Maximum Ratings and Thermal Characteristics

(TA = 25°C, unless otherwise noted)

Parameter	Symbol	Value	Unit
Junction Temperature	Tj	+150	°C
Storage Temperature	Tstg	-55 to +150	°C
Collector-Base Voltage	V _{CB0}	-140	V
Collector-Emitter Voltage	V _{CEO}	-100	V
Emitter-Base Voltage	V _{EBO}	-6	V
Collector Current (DC)	I _C	-5	A
Collector Current (Pulse)	I _C	-10	A
Total Power Dissipation	PD	3	W

*The power which can be dissipated assuming the device is mounted in a typical manner on a P.C.B. with copper equal to 4 square inch minimum.

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

Parameter	Symbol	Min	Typ.	Max	Uni	Test Conditions
Collector-Base Breakdown Voltage	BV _{CB0}	-140	-	-	V	I _C =-100μA, I _E =0
Collector-Emitter Breakdown Voltage (w/ Real Device Limit)	BV _{CEr}	-140	-	-	V	I _C =-1μA, R _B <=1KΩ
Collector-Emitter Breakdown Voltage	*BV _{CEO}	-100	-	-	V	I _C =-10mA, I _B =0
Emitter-Base Breakdown Voltage	BV _{EBO}	-6	-	-	V	I _E =-100μA, I _C =0
Collector-Base Cutoff Current	I _{CB0}	-	-	-50	nA	V _{CB} =-100V, I _E =0
Collector-Base Cutoff Current (w/ Real Device Limit)	I _{CEr}	-	-	-50	nA	V _{CB} =-100V, R<=1KΩ
Emitter-Base Cutoff Current	I _{EBO}	-	-	-10	nA	V _{EB} =-6V, I _C =0
Collector Saturation Voltage 1	*V _{CE(sat)1}	-	-20	-50	mV	I _C =-100mA, I _B =-10mA
Collector Saturation Voltage 2	*V _{CE(sat)2}	-	-90	-115	mV	I _C =-1A, I _B =-100mA
Collector Saturation Voltage 3	*V _{CE(sat)3}	-	-160	-220	mV	I _C =-2A, I _B =-200mA
Collector Saturation Voltage 4	*V _{CE(sat)4}	-	-300	-420	mV	I _C =-4A, I _B =-400mA
Base Saturation Voltage	*V _{BE(sat)}	-	-1.01	-1.17	V	I _C =-4A, I _B =-400mA
Base-Emitter Voltage	*V _{BE(on)}	-	-0.925	-1.16	V	V _{CE} =-1V, I _C =-4A
DC Current Gain 1	*h _{FE1}	100	200	-		V _{CE} =-1V, I _C =-10mA
DC Current Gain 2	*h _{FE2}	100	200	300		V _{CE} =-1V, I _C =-1A
DC Current Gain 3	*h _{FE3}	50	90	-		V _{CE} =-1V, I _C =-3A
DC Current Gain 4	*h _{FE4}	30	50	-		V _{CE} =-1V, I _C =-4A
DC Current Gain 5	*h _{FE5}	-	15	-		V _{CE} =-1V, I _C =-10A
Gain-Bandwidth Product	f _T	-	125	-	MHZ	V _{CE} =-10V, I _C =-100mA, f=50MHZ

Output Capacitance	Cob	-	65	-	pF	V _{CB} =-10V, I _E =0, f=1MHz
On-Time	t _{on}	-	110	-	ns	V _{CC} =-10V, I _C =2A, I _{B1} =-200mA, I _{B1} =200mA
Off-Time	t _{off}	-	460	-		

*Measured under pulse condition. Pulse width ≤ 300μs, Duty Cycle ≤ 2%
Spice parameter data is available upon request for this device.

