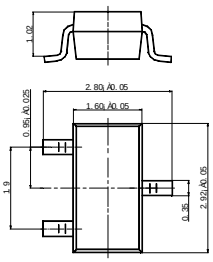
2SC3739 TRANSISTOR (NPN)

SOT-23-3L

1. EMITTER
2. BASE
3. COLLECTOR



FEATURES

Power dissipation

P_{CM}: 0.2 W (Tamb=25℃)

Collector current

I_{CM}: 0.5 A

Collector-base voltage

$V_{(BR)CBO}$: 60 V

Operating and storage junction temperature range

T_J,T_{stg}: -55℃ to +150℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	Ic=100μA, I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	Ic= 1mA, I_B=0	40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 100μA, I_C=0	5.0			V
Collector cut-off current	I_{CBO}	V_{CB}=40 V , I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 4.0V , I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}= 1.0V, I_C= 150mA	75	150	300	
DC current gain	$h_{FE(2)}$	V_{CE}=2.0V, I_C=500mA	20	75		
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500 mA, I_B= 50mA		0.25	0.75	V
Base-emitter voltage	$V_{BE(sat)}$	I_C=500mA, V_{CE}=50V		1.0	1.2	V
Transition frequency	f_T	V_{CE}=10V, I_C= 20mA	200	400		MHz
Ouput Capacitance	Cob	V_{CB}=10V,IE=20mA		3.5	8.0	pF
Turn-on Time	ton	V_{CC}=30V I_C=150mA I_{B1}=-I_{B2}=15mA			35	ns
Storage Time	tstg				225	ns
Turn-on Time	Toff				275	ns

CLASSIFICATION OF $h_{FE(1)}$

Marking	B12	B13	B14
Range	75-150	100-200	150-300