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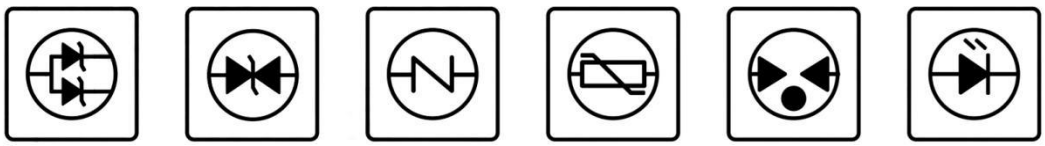
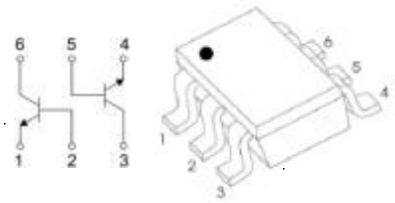
SEMICONDUCTOR



Product data sheet



SOT-363

DUAL TRANSISTOR (NPN+NPN)

APPLICATION

This device is designed for general purpose amplifier applications

MARK:1Ft

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

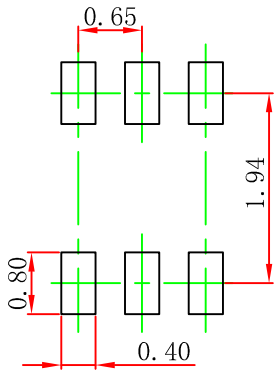
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	
V_{EBO}	Emitter-Base Voltage	6	
I_C	Collector Current-Continuous	100	mA
P_D	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance. Junction to Ambient	625	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~+150	

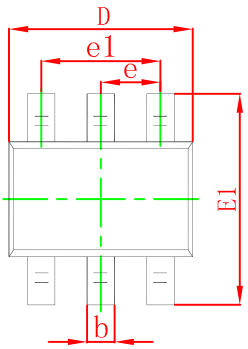
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

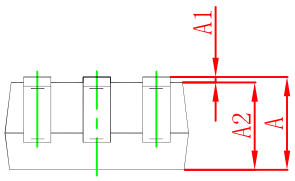
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10μA,I_E=0		50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0		45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA,I_C=0		6			V
Collector cut-off current	I_{CBO}	V_{CB}=30V,I_E=0				15	nA
Emitter cut-off current	I_{EBO}	V_{EB} =4V, I_C=0				15	
DC current gain*	h_{FE}	V_{CE}=5V,I_C=2mA	A	110		220	
			B	200		450	
			C	420		800	
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	I_C=10mA,I_B=0.5mA				0.25	V
	$V_{CE(sat)(2)}$	I_C=100mA,I_B=5mA				0.65	V
Base-emitter voltage	$V_{BE(1)}$	V_{CE}=5V,I_C=2mA		0.58		0.7	V
	$V_{BE(2)}$	V_{CE}=5V,I_C=10mA				0.77	V
Transition frequency	f_T	V_{CE}=5V,I_C=20mA ,f=100MHz			200		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz			2		pF

*pulse test: Pulse Width ≤300μs, Duty Cycle≤ 2.0%.

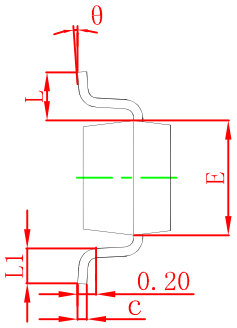
SOT-363







Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

REEL SPECIFICATION

P/N	PKG	QTY
BC847S	SOT-363	3000

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