SOT-363 Plastic-Encapsulate Transistors

DUAL TRANSISTOR(NPN+NPN)

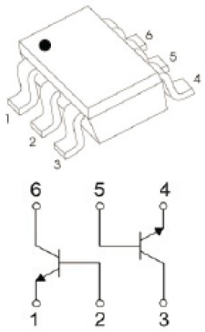
Features

- Epitaxial Planar Die Construction
- Ideal for Low power Amplification and Switching
- High Stability and High Reliability
- AEC-Q101 qualified (Automotive grade with suffix "Q")
- Expsemi electronics

Mechanical Data

- SOT-363 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

SOT-363



Marking: K2X

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

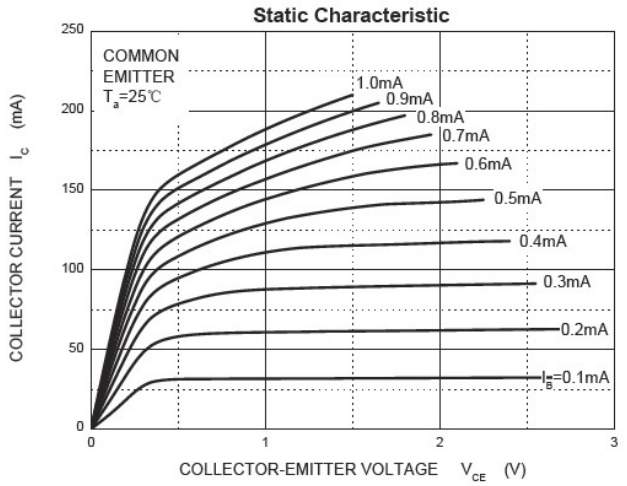
Parameters	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter -Base Voltage	V_{EBO}	6	V
Collector Current-Continuous	I_C	600	mA
Collector Power Dissipation	P_C	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	℃/W
Junction Temperature	T_j	150	℃
Storage Temperature	Tstg	-55-+150	℃

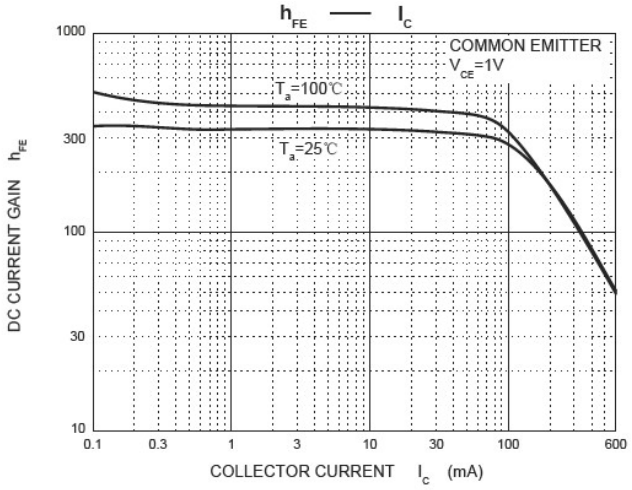
Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

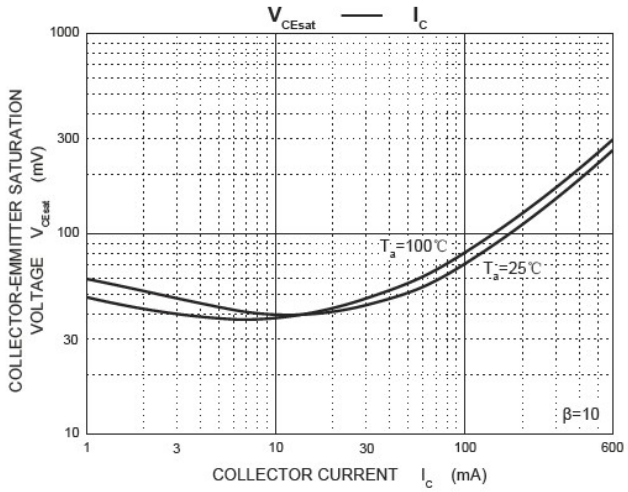
Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100uA, I_E=0	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100uA, I_C=0	6		V
Collector cut-off current	I_{CBO}	V_{CB}=50V, I_E=0		100	nA
Collector cut-off current	I_{CEO}	V_{CE}=35V, I_B=0		500	nA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0		100	nA
DC current gain	hFE(1)*	V_{CE}=1V, I_C=0.1mA	20		
	hFE(2)*	V_{CE}=1V, I_C=1mA	40		
	hFE(3)*	V_{CE}=1V, I_C=10mA	80		
	hFE(4)*	V_{CE}=1V, I_C=150mA	100	300	
	hFE(5)*	V_{CE}=2V, I_C=500mA	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$*	I_C=500mA, I_B=50mA		0.75	V
		I_C=150mA, I_B=15mA		0.40	V
Base -emitter saturation voltage	$V_{BE(sat)}$*	I_C=500mA, I_B=50mA		1.20	V
		I_C=150mA, I_B=15mA	0.75	0.95	V
Transition frequency	f_T	V_{CE}=10V, I_C=20mA,f=100MHz	250		MHz
Output Capacitance	Cob	V_{CB}=5V, I_E=0, f=1MHz		6.5	pF
Delay time	td	V_{CC}=30V, $V_{BE(off)}$=2V, I_C=150mA, I_{B1}=15mA		15	Ns
Rise time	tr			20	Ns
Storage time	ts	V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA		225	Ns
Fall time	tf			30	ns

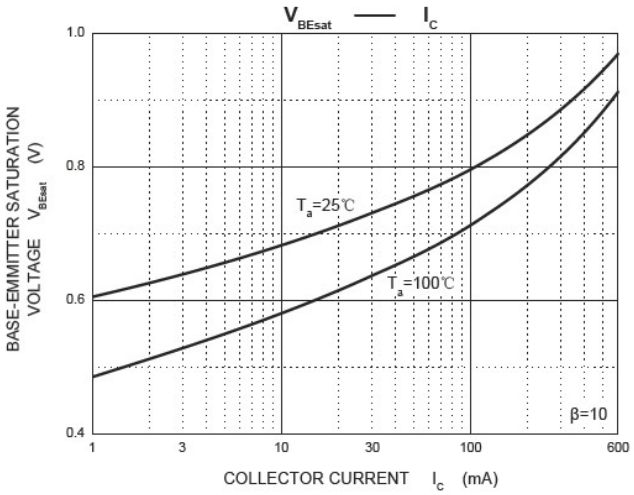
*Pulse test: pulse width≤300us, duty cycle≤2.0%.

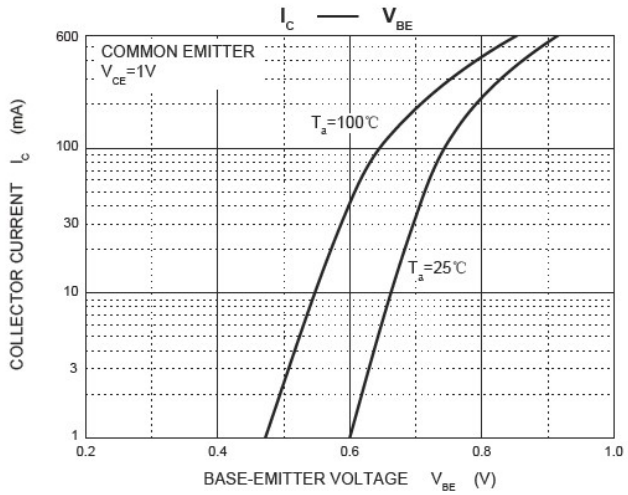
Typical characteristics

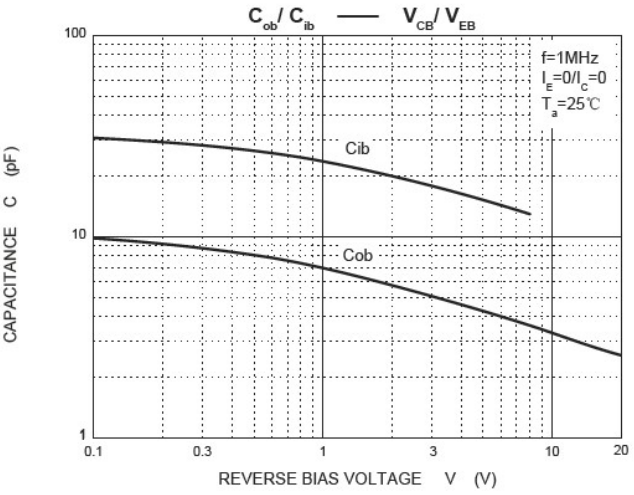


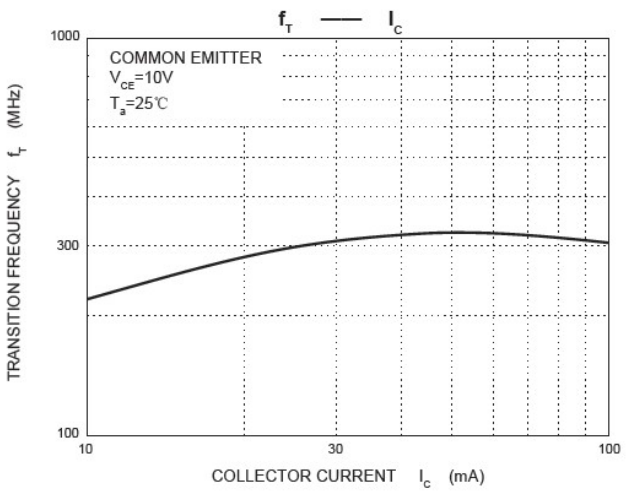


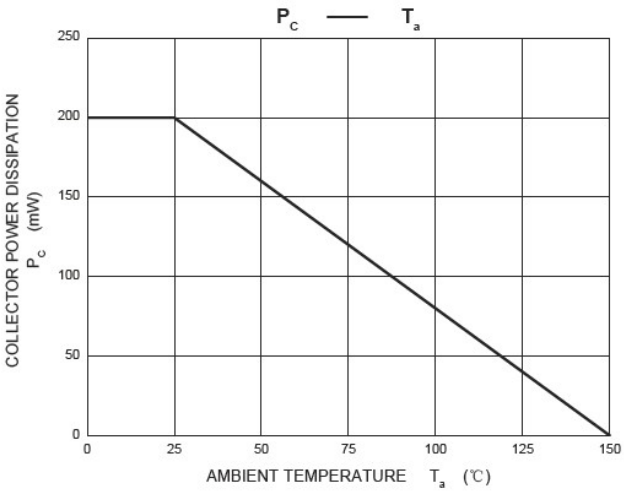




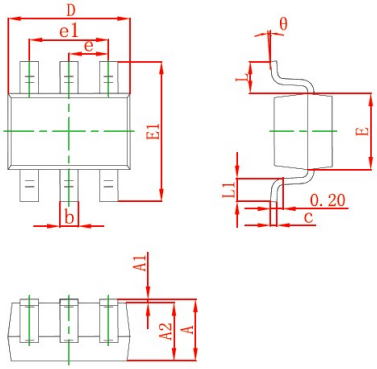








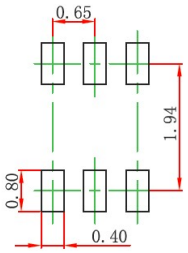
SOT-363 PACKAGE OUTLINE Plastic surface mounted package



Symbol	Dimensions In Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.100	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.400
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
θ	0°	8°

Precautions: PCB Design

Recommended land dimensions for SOT-363 diode. Electrode patterns for PCBs



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