

SOT-363 Plastic-Encapsulate Transistors

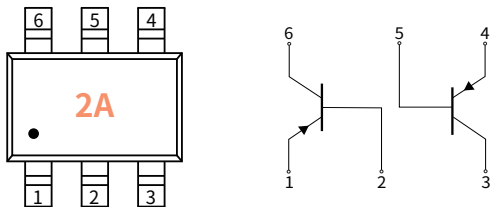
Features

- Power dissipation of 200mW
- Ideal for low power amplification and switching
- Dual Transistors (PNP+PNP)
- Epitaxial planar die construction

Mechanical Data

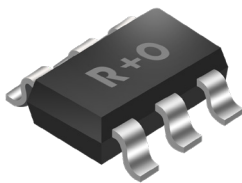
- Case: SOT-363
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant,halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram



Collector-Emitter Voltage
V_{CEO} -40V
Collector Current
0.2 Ampere

SOT-363



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	V _{CBO}	V	-40
Collector-Emitter Voltage	V _{CEO}		-40
Emitter-Base Voltage	V _{EBO}		-5.0
Collector Current	I _C	mA	-200
Collector Power Dissipation	P _C	mW	200
Storage temperature	T _{stg}	°C	-55 ~+150
Junction temperature	T _j	°C	-55 ~+150
Typical Thermal Resistance	R _{θJA}	°C /W	625

Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Typ	Max
Transition frequency	f _T	I _C =-10mA, V _{CE} =-20V, f=100MHz	MHz	300	—	—

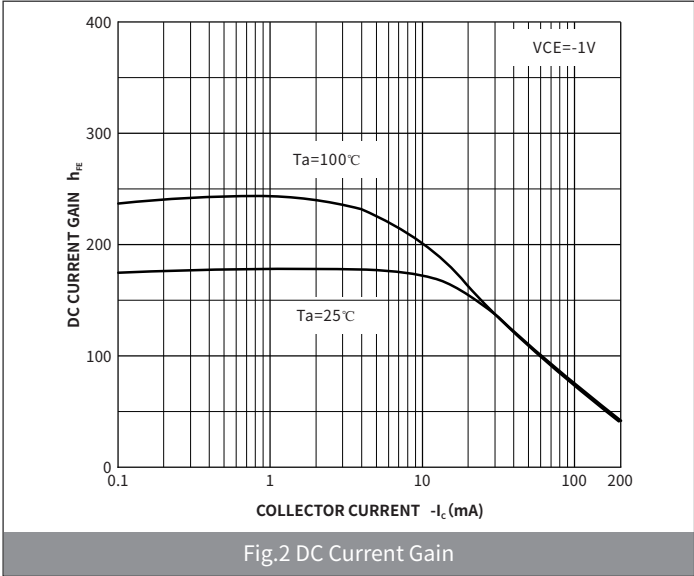
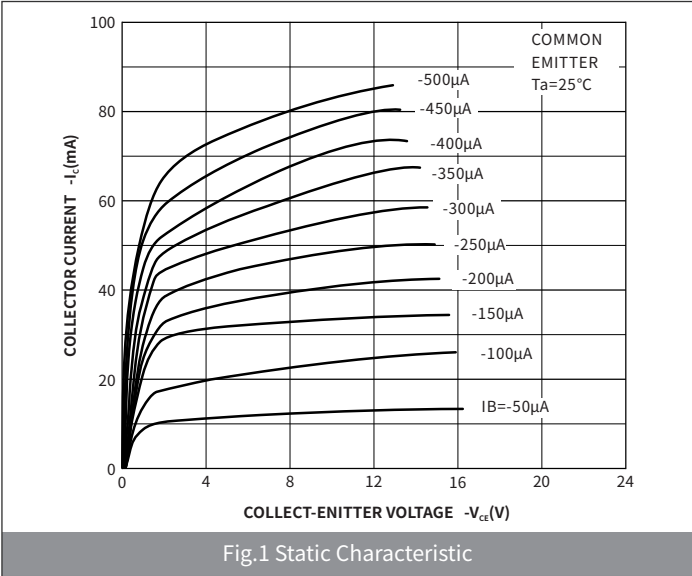
Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-363	R1	0.038	3000	24000	120000	7"

● Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	SYMBOL	UNIT	Condition	Min	Typ	Max
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=-10\mu A, I_E=0$	-40	—	—
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$		$I_C=-1.0mA, I_B=0$	-40	—	—
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$		$I_E=-10\mu A, I_C=0$	-5.0	—	—
Collector-Base cut-off current	I_{CBO}	nA	$V_{CB}=-40V, I_E=0$	—	—	-100
Emitter-Base cut-off current	I_{EBO}		$V_{EB}=-5.0V, I_C=0$	—	—	-100
DC Current Gain	$h_{FE(1)}$	—	$I_C=-10mA, V_{CE}=-1.0V$	100	—	300
	$h_{FE(2)}$	—	$I_C=-50mA, V_{CE}=-1.0V$	60	—	—
	$h_{FE(3)}$	—	$I_C=-100mA, V_{CE}=-2.0V$	30	—	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=-50mA, I_B=-5.0mA$	—	—	-0.3
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=-50mA, I_B=-5.0mA$	—	—	-0.95
Delay time	t_d	ns	$V_{CC}=-3.0V$ $V_{BE(off)}=-0.5V$ $I_C=-10mA$ $I_{B1}=I_{B2}=-1.0mA$	—	—	35
Rise time	t_r			—	—	35
Storage time	t_s		$V_{CC}=-3.0V$ $I_C=-10mA$ $I_{B1}=I_{B2}=-1.0mA$	—	—	225
Fall time	t_f			—	—	75

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



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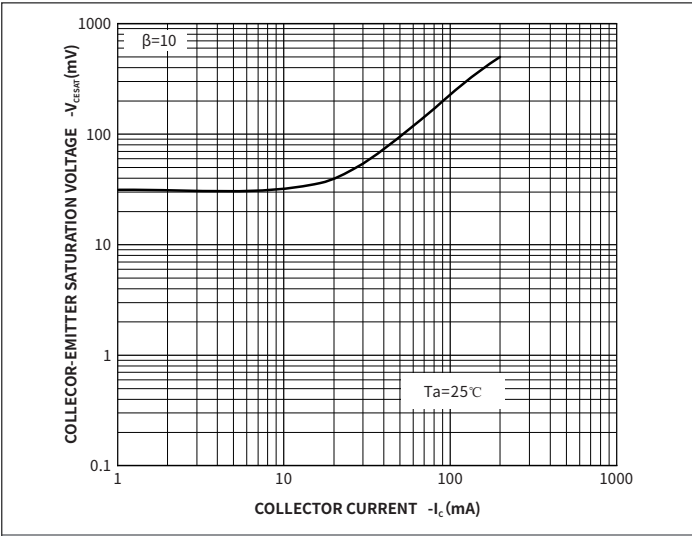


Fig.3 Collector-Emitter Saturation Voltage

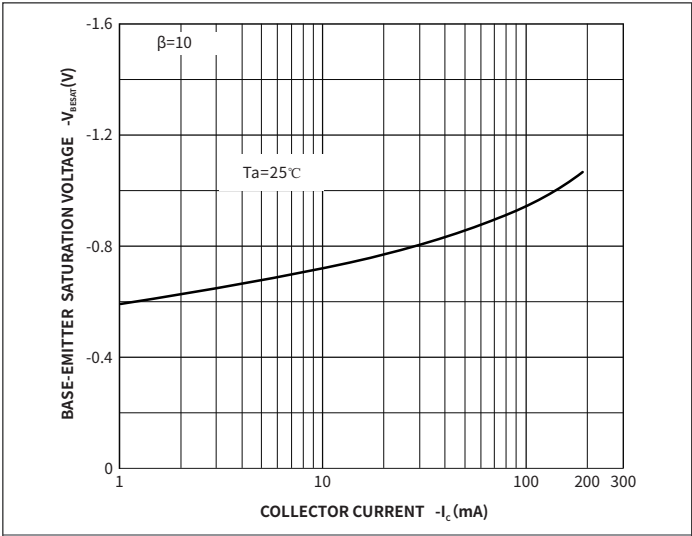


Fig.4 Base-Emitter Saturation Voltage

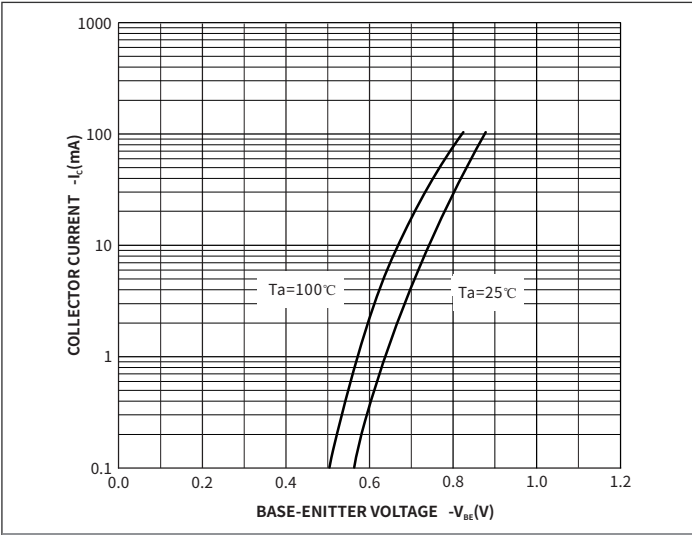


Fig.5 Base-Emitter On Voltage

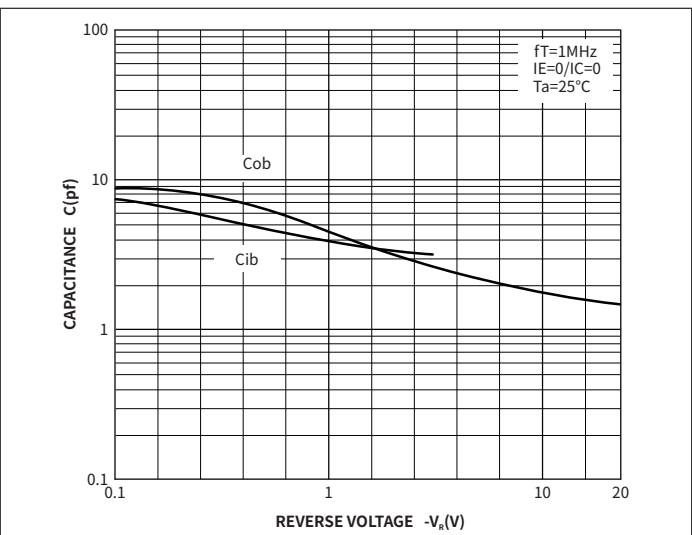


Fig.6 $C_{ob}/C_{ib}-V_{CB}V_{EB}$

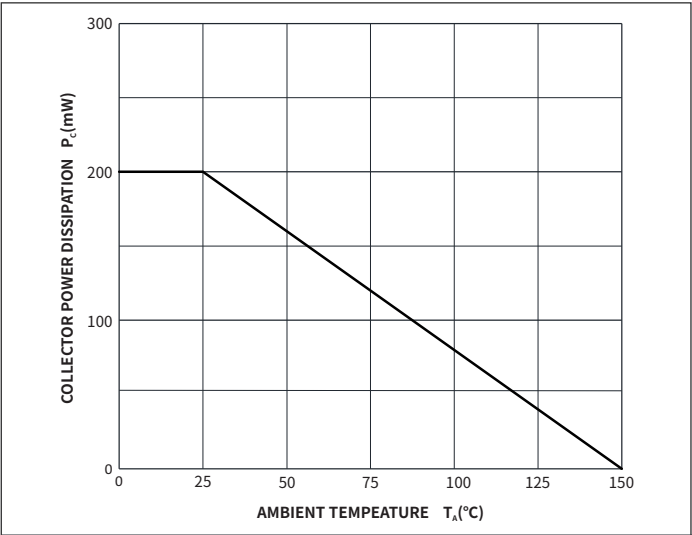


Fig.7 Power Derating Curve

● Package Outline Dimensions (SOT-363)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.9	1.10	0.035	0.043
A1	-	0.10	-	0.004
A2	0.80	1.00	0.0315	0.039
b	0.15	0.35	0.006	0.014
D	1.80	2.20	0.071	0.087
E	1.15	1.35	0.045	0.053
E1	2.00	2.40	0.079	0.094
F	0.10	0.25	0.004	0.010
e	0.650TYP		0.026TYP	
e1	1.20	1.40	0.047	0.055
L	0.525REF		0.021REF	
L1	0.32REF		0.0126REF	
θ	-	8°	-	8°

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
G	-	0.65	-	0.025
H	-	1.94	-	0.076
X	0.40	-	0.016	-
Y	0.80	-	0.031	-