

SOT-363 Plastic-Encapsulate Transistors

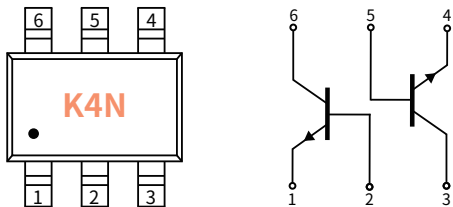
Features

- Power dissipation of 0.2W
- Ideal for medium power amplification and switching
- Dual Transistors (NPN+NPN)
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Mechanical Data

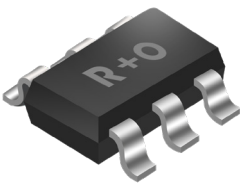
- Case: SOT-363
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant,halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram



Collector-Base Voltage
VCBO 180V
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	180
Collector-Emitter Voltage	V_{CEO}		160
Emitter-Base Voltage	V_{EBO}		6.0
Collector Current	I_C	A	0.2
Collector Power Dissipation	P_C	W	0.2
Storage temperature	T_{stg}	°C	-55 ~+150
Junction temperature	T_j	°C	150
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	625

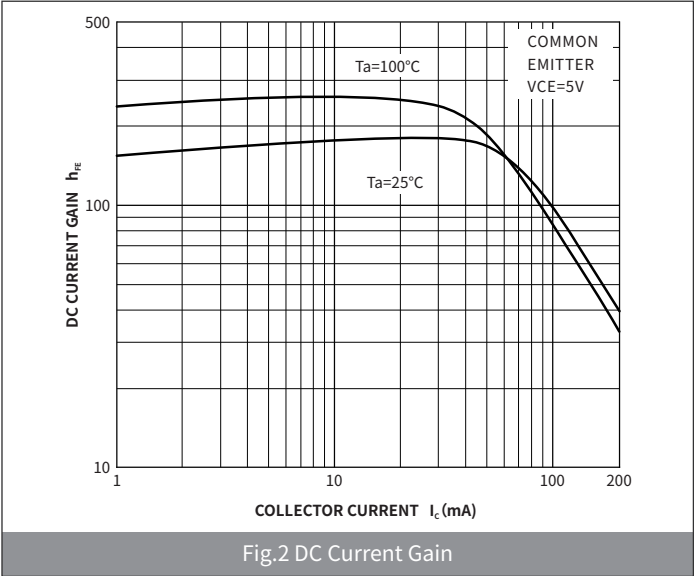
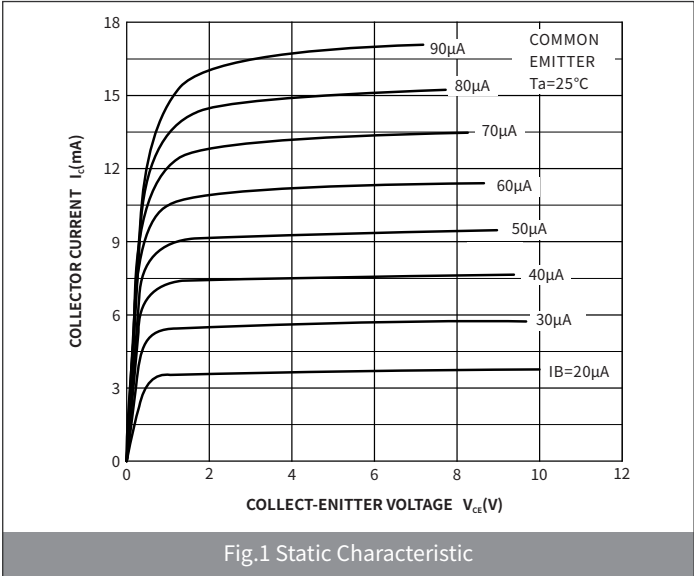
Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Typ	Max
Transition frequency	f_T	$I_C=10mA, V_{CE}=10V, f=100MHz$	MHz	100	—	300

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

PARAMETER	SYMBOL	UNIT	Condition	Min	Typ	Max
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=100\mu A, I_E=0$	180	—	—
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$		$I_C=1mA, I_B=0$	160	—	—
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$		$I_E=10\mu A, I_C=0$	6.0	—	—
Collector-Base cut-off current	I_{CBO}	nA	$V_{CB}=120V, I_E=0$	—	—	50
Emitter-Base cut-off current	I_{EBO}		$V_{EB}=4.0V, I_C=0$	—	—	50
DC Current Gain	$h_{FE(1)}$	—	$I_C=1mA, V_{CE}=5V$	80	—	—
	$h_{FE(2)}$	—	$I_C=10mA, V_{CE}=5V$	100	—	300
	$h_{FE(3)}$	—	$I_C=50mA, V_{CE}=5V$	30	—	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=10mA, I_B=1mA$	—	—	0.15
			$I_C=50mA, I_B=5mA$			0.2
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=10mA, I_B=1mA$	—	—	1
			$I_C=50mA, I_B=5mA$			1
Output Capacitance	C_{ob}	pF	$V_{CB}=10V, I_E=0, f=1MHz$	—	—	6

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



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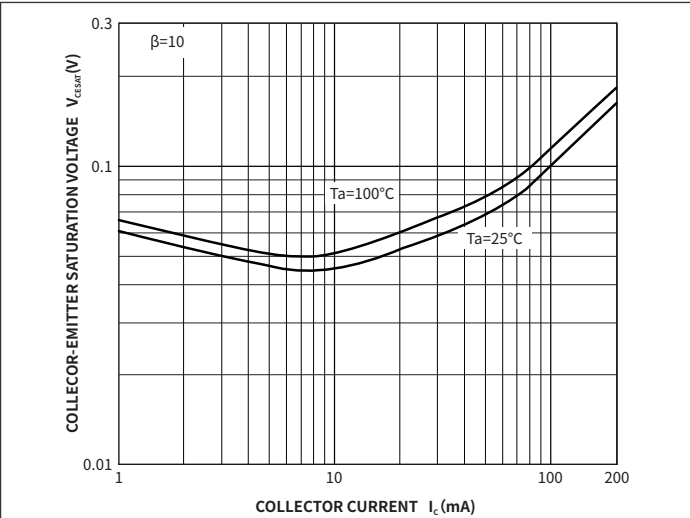


Fig.3 Collector-Emitter Saturation Voltage

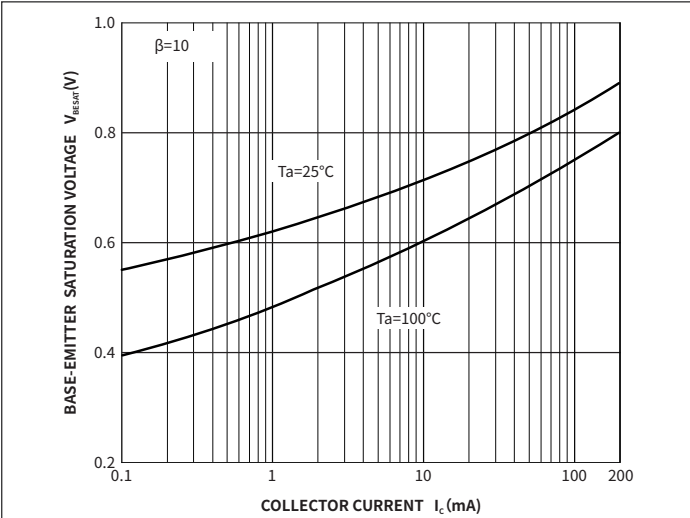


Fig.4 Base-Emitter Saturation Voltage

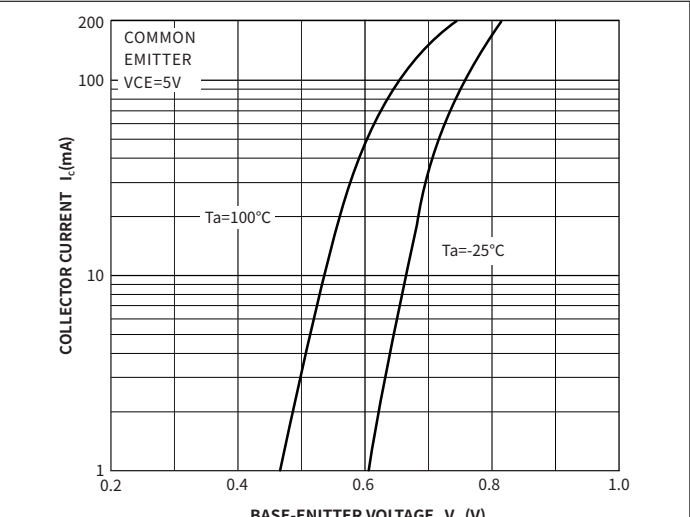


Fig.5 Base-Emitter On Voltage

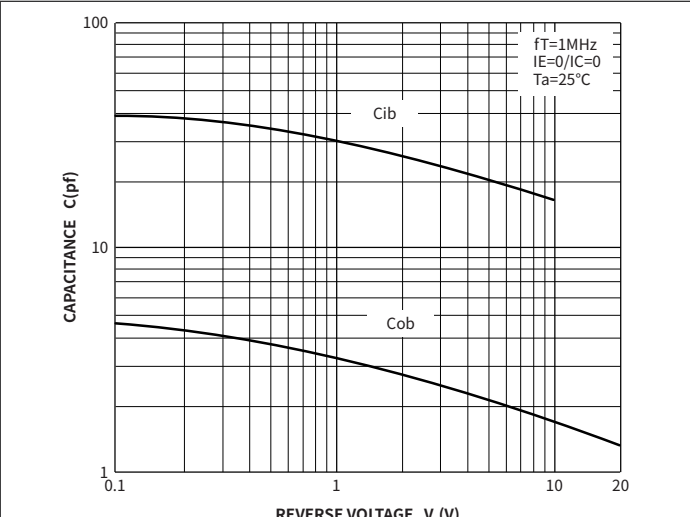


Fig.6 $C_{ob}/C_{ib}-V_{CB}V_{EB}$

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-363	R1	0.0068	3000	45000	180000	7"

● 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	0.90	1.00	0.035	0.039
b	0.15	0.40	0.006	0.016
D	2.00	2.20	0.079	0.087
E	1.15	1.35	0.045	0.053
E1	2.15	2.40	0.085	0.094
e	0.650TYP		0.026TYP	
e1	1.20	1.40	0.047	0.055
L	0.525REF		0.021REF	
L1	0.26	0.46	0.010	0.018
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	-