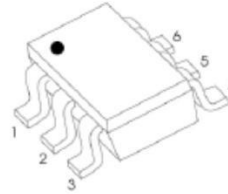


APPLICATION

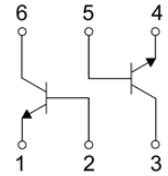
This device is designed for general purpose amplifier applications



SOT-363



Equivalent Circuit



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS TR1 (T_a=25°C unless otherwise noted)

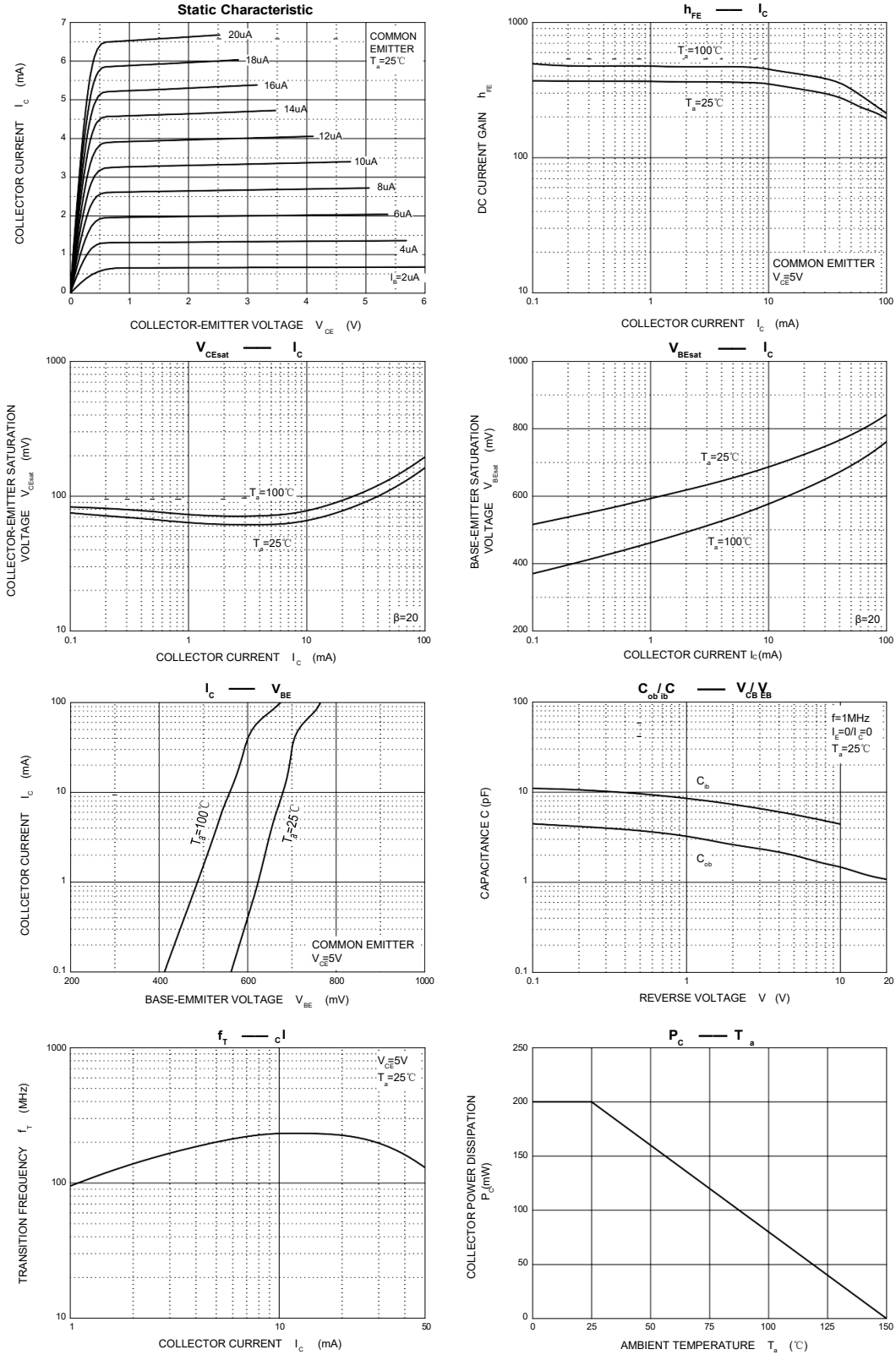
Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	50	V
V _{CEO}	Collector-Emitter Voltage	45	
V _{EBO}	Emitter-Base Voltage	6	
I _C	Collector Current-Continuous	F00	mA
P _D	Power Dissipation	200	mW
R _{θJA}	Thermal Resistance. Junction to Ambient	625	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Electrical Characteristics ($T_a=25^\circ\text{C}$ unless otherwise noted)

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

*pulse test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$.

RATING AND CHARACTERISTIC CURVES



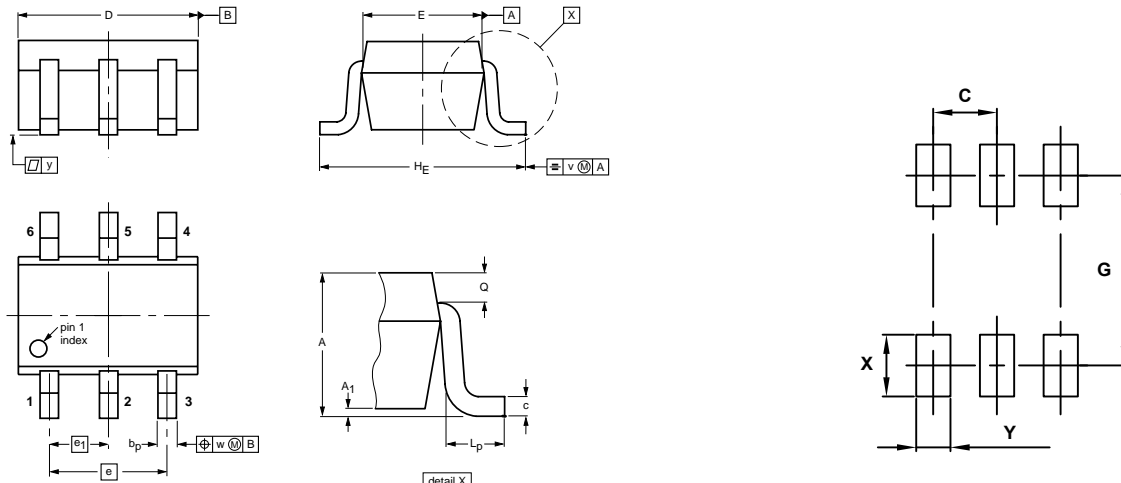
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C



Package Dimensions & Suggested Pad Layout

SOT-363



Dimensions	Value (in mm)
C	0.65
G	1.90
X	0.85
Y	0.40

DIMENSIONS (mm are the original dimensions)

UNIT	A	A1 max	bp	c	D	E	e	e1	HE	Lp	Q	v	w	y
mm	1.1 0.8	0.1	0.30 0.20	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.25 0.15	0.2	0.2	0.1

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	4.00±0.20
		P2	2.00±0.20
		D0	1.55±0.20
		D1	1.00±0.20
		E	1.55±0.25
		F	3.60±0.20
		W	8.00±0.20
		A0	3.00±0.20
		B0	3.00±0.20
		K0	1.30±0.20
		T	0.20±0.20
		D2	177.0±5.0
		D3	55Min.
		D4	R24.6±2.0
G	R82.0±2.0		
I	13.0±2.0		
W1	10.20±3.0		
Quantity: 3000PCS			

7" Reel

