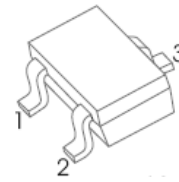




FEATURES

Complementary to MMBT5551W
Small Surface Mount Package
Ideal for Medium Power Amplification and Switching



- 1. BASE
- 2. EMITTER
- 3. COLLECTOR

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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

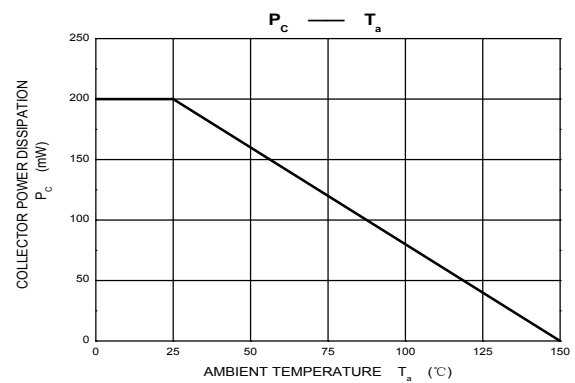
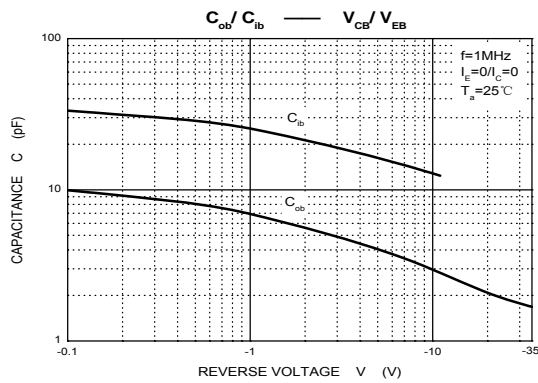
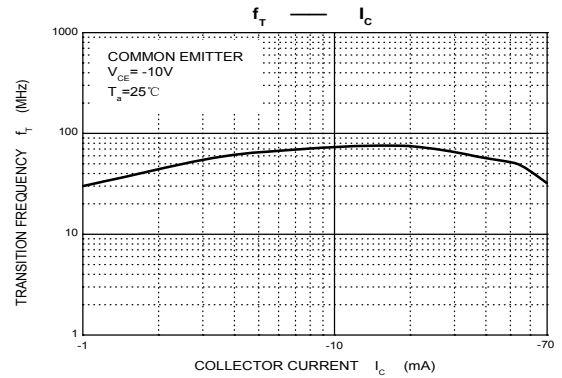
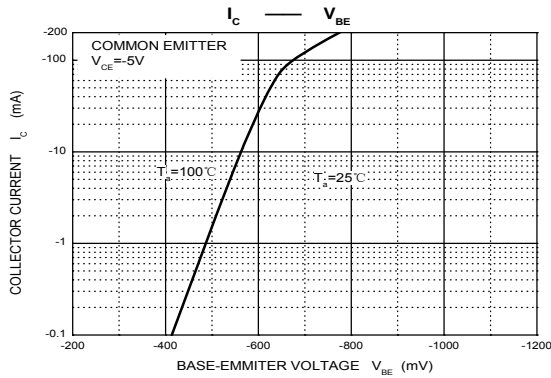
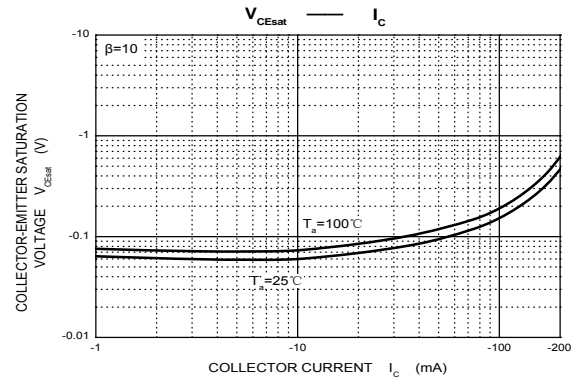
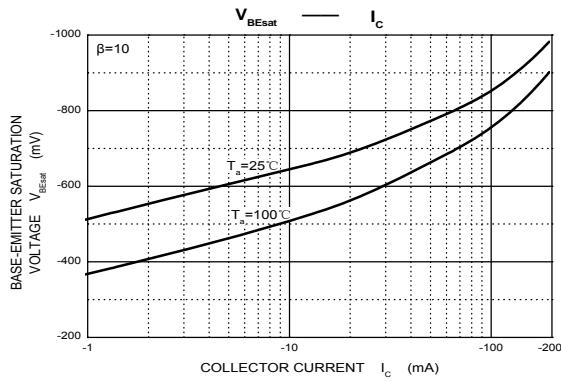
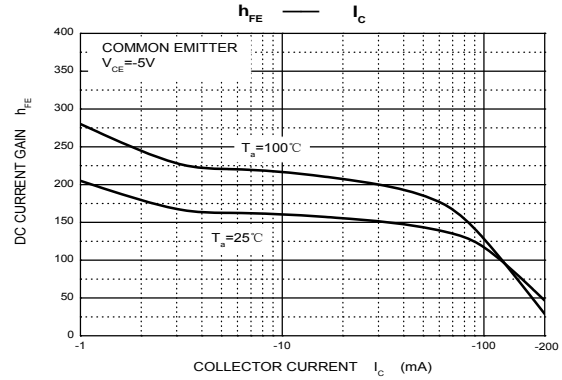
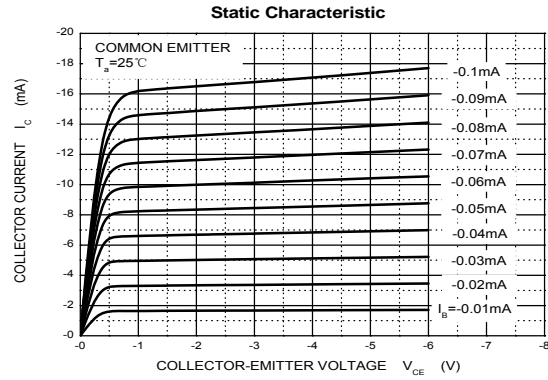
MAXIMUM RATINGS (T = 25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-600	mA
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -120V, I_E = 0$			-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3V, I_C = 0$			-50	nA
DC current gain	h_{FE}	$V_{CE} = -5V, I_C = -1mA$	80			
		$V_{CE} = -5V, I_C = -10mA$	100		300	
		$V_{CE} = -5V, I_C = -50mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50mA, I_B = -5mA$			-0.5	V
		$I_C = -10mA, I_B = -1mA$			-0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -50mA, I_B = -5mA$			-1	V
		$I_C = -10mA, I_B = -1mA$			-1	V
Transition frequency	f_T	$V_{CE} = -10V, I_C = -10mA, f = 100MHz$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$			6	pF

RATING AND CHARACTERISTIC CURVES



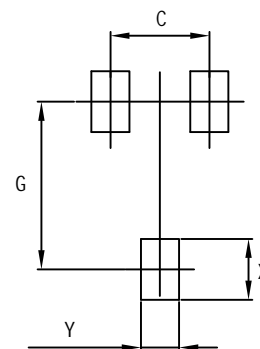
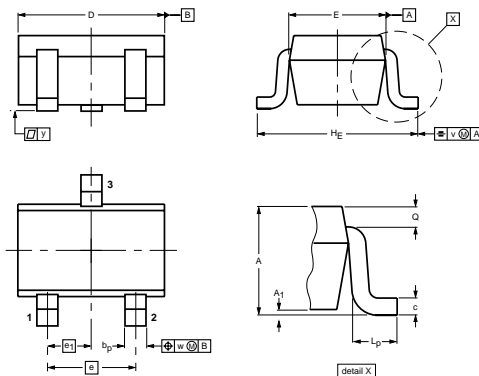
Soldering parameters

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

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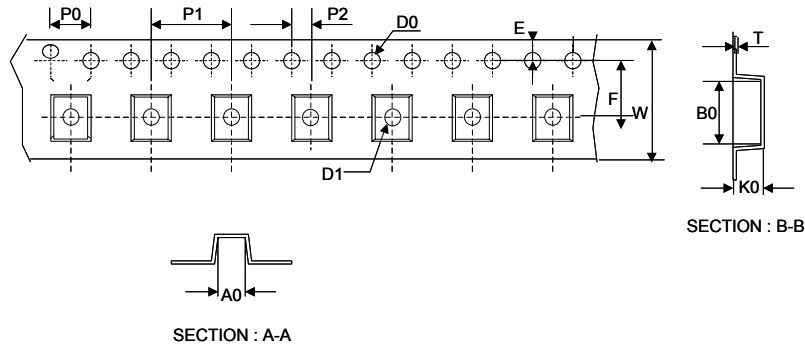
Dimensions	Value (in mm)
C	1.30
G	2.00
X	0.90
Y	0.65

DIMENSIONS (mm are the original dimensions)

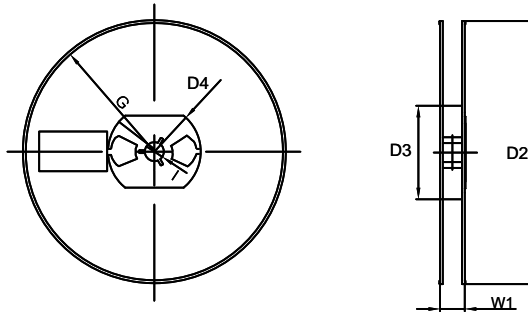
UNIT	A	A ₁ max	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

Tape & reel specification

Tape



7" Reel



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	2.50±0.20
B0	2.60±0.20
K0	1.40±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