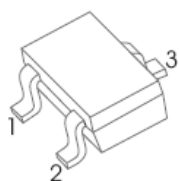
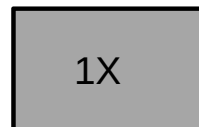
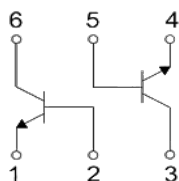


FEATURES

Two transistors in one package
Reduces number of components and board space
No mutual interference between the transistors



1. BASE
2. EMITTER
3. COLLECTOR



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BC846ADW=1A; BC846BDW=1B;
BC847ADW=1E; BC847BDW=1F; BC847CDW=1G;
BC848ADW=1J; BC848BDW=1K; BC848CDW=1L

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC846 BC847 BC848	V_{CBO}	80 50 30	V
Collector Emitter Voltage	BC846 BC847 BC848	V_{CEO}	65 45 30	V
Emitter Base Voltage	BC846 BC847 BC848	V_{EBO}	6 6 5	V
Collector Current		I_C	100	mA
Peak Collector Current		I_{CM}	200	mA
Total Power Dissipation		P_{tot}	200	mW
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V _{CE} = 5 V, I _C = 2 mA				
BC846A~BC848A	h _{FE}	110	220	-
BC846B~BC848B	h _{FE}	200	450	-
BC847C~BC848C	h _{FE}	420	800	-
Collector Base Voltage at I _C = 10 μA				
BC846	V _{CBO}	80	-	V
BC847		50	-	
BC848		30	-	
		30	-	
		50	-	
Collector Emitter Voltage at I _C = 10 mA				
BC846	V _{CEO}	65	-	V
BC847		45	-	
BC848		30	-	
		-	-	
		-	-	
Emitter Base Voltage at I _E = 1 μA				
BC846	V _{EBO}	6	-	V
BC847		6	-	
BC848		5	-	
Collector Base Cutoff Current at V _{CB} = 30 V	I _{CBO}	-	15	nA
Emitter Base Cutoff Current at V _{EB} = 5 V	I _{EBO}	-	100	nA
Collector Emitter Saturation Voltage at I _C = 10 mA, I _B = 0.5 mA I _C = 100 mA, I _B = 5 mA	V _{CE(sat)}	- -	0.25 0.6	V
Base Emitter Voltage at V _{CE} = 5 V, I _C = 2 mA V _{CE} = 5 V, I _C = 10 mA	V _{BE}	0.58 -	0.7 0.77	V
Transition Frequency at V _{CE} = 5 V, I _C = 10 mA, f = 100 MHz	f _T	100	-	MHz
Collector Output Capacitance at V _{CB} = 10 V, I _E = 0, f = 1 MHz	C _{ob}	-	4.5	pF

RATING AND CHARACTERISTIC CURVES

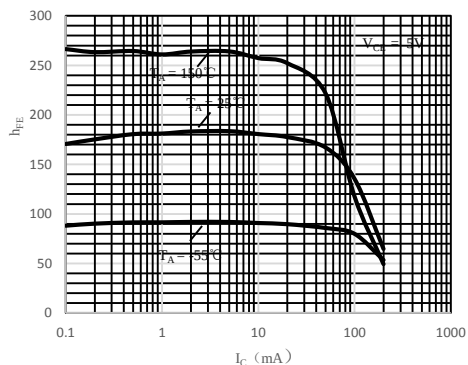


Fig 1 h_{FE} vs. I_C

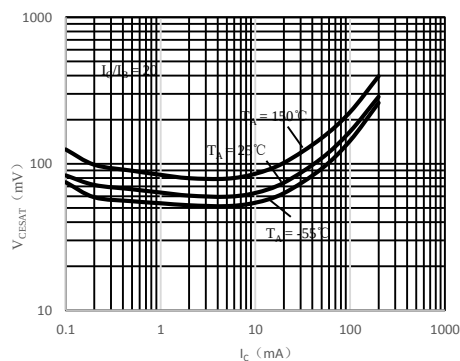


Fig 2 $V_{CE(sat)}$ vs. I_C

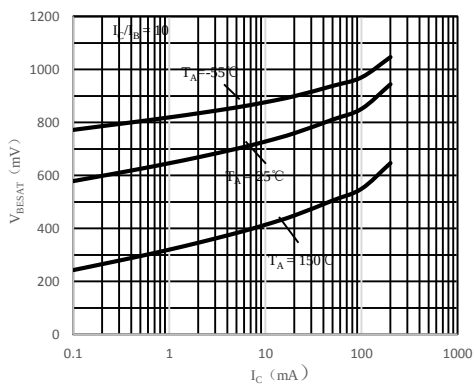


Fig 3 $V_{BE(sat)}$ vs. I_C

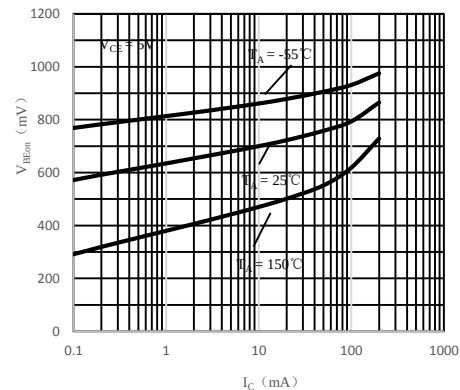


Fig 4 $V_{BE(on)}$ vs. I_C

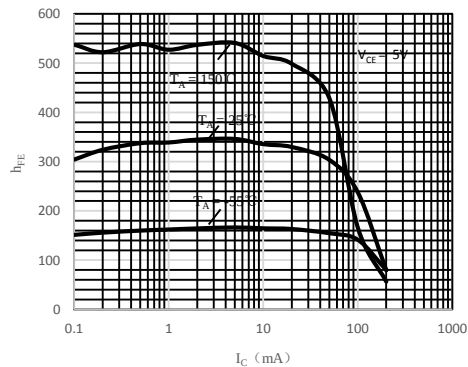


Fig 1 h_{FE} vs. I_C

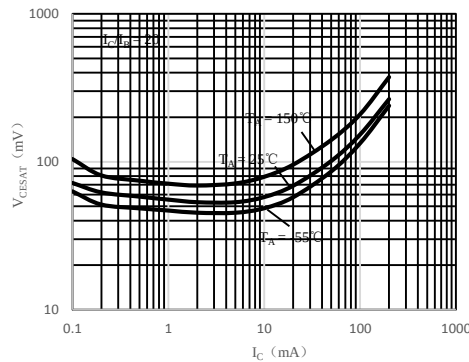


Fig 2 $V_{CE(sat)}$ vs. I_C

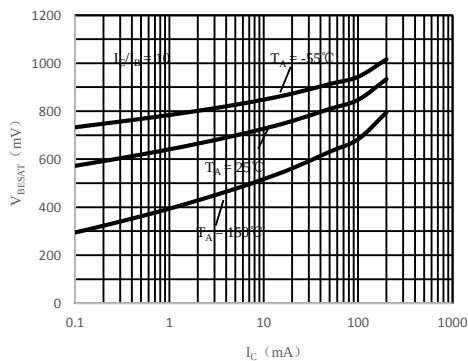


Fig 3 $V_{BE(sat)}$ vs. I_C

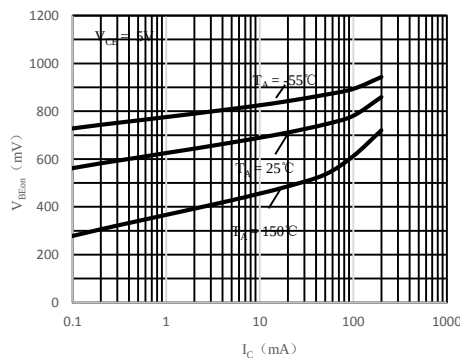


Fig 4 $V_{BE(on)}$ vs. I_C

RATING AND CHARACTERISTIC CURVES

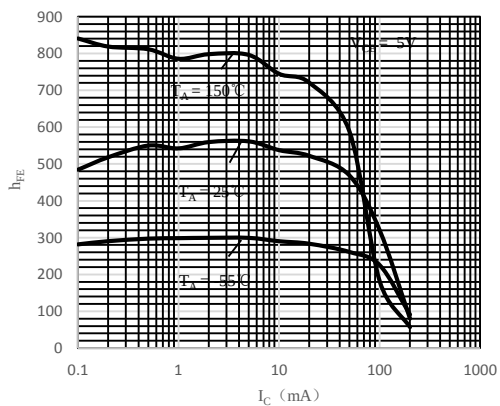


Fig 1 h_{FE} vs. I_C

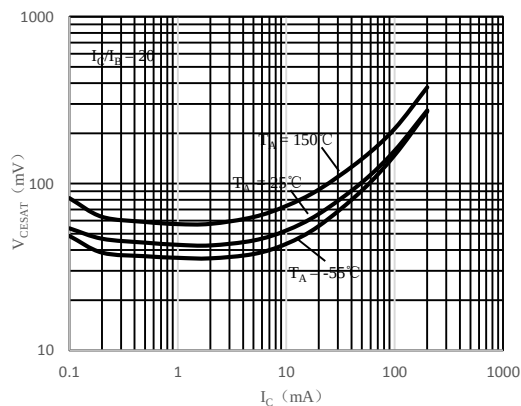


Fig 2 $V_{CE(sat)}$ vs. I_C

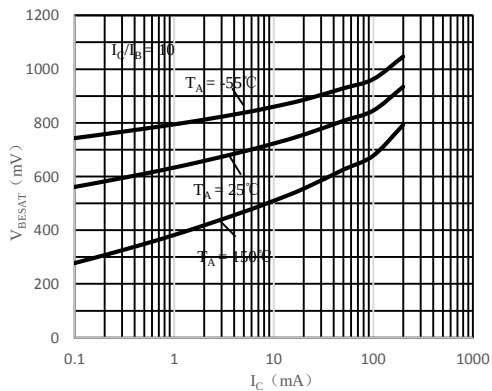


Fig 3 $V_{BE(sat)}$ vs. I_C

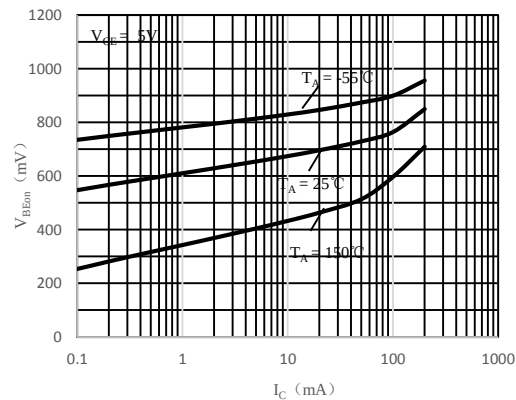
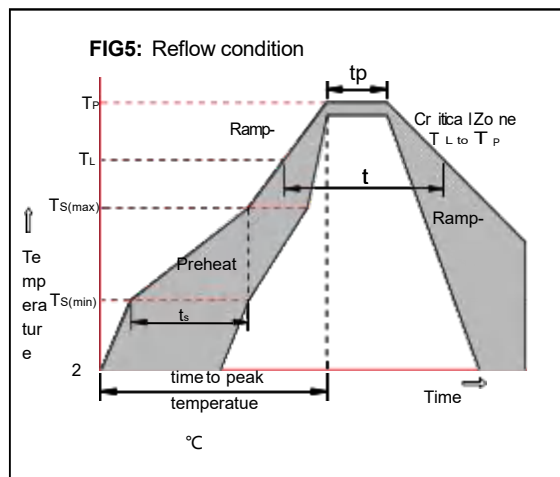


Fig 4 $V_{BE(ON)}$ vs. I_C

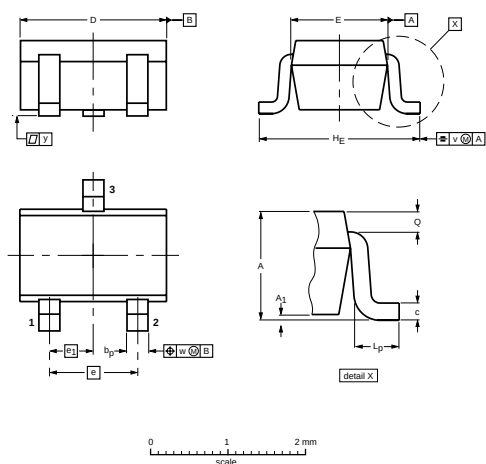
Soldering parameters

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



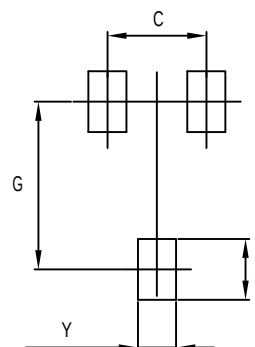
Package Dimensions & Suggested Pad Layout

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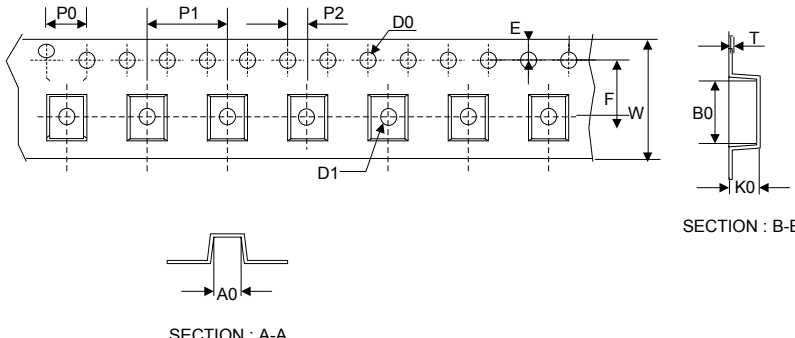
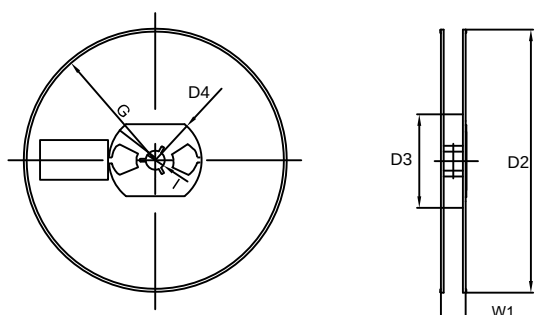
DIMENSIONS (mm are the original dimensions)

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



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

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	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
7" Reel		G	R82.0±2.0
		I	13.0±2.0
		W1	10.20±3.0
		Quantity: 3000PCS	