



JZT955

Rev.1.0

FEATURE

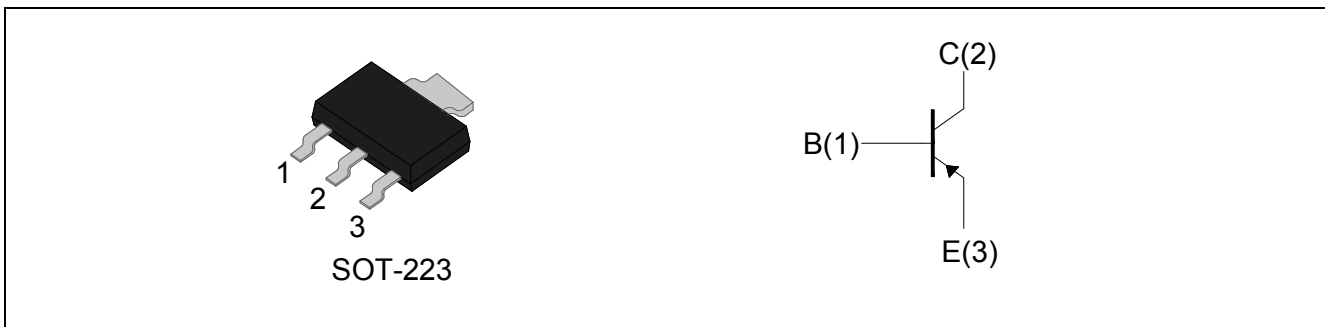
- Low collector-emitter saturation voltage
- High continuous collector current

APPLIACTIONS

- Linear regulator
- MOSFET drivers
- Audio amplifiers.etc.

MAIN FEATURES

Symbol	Value	Unit
I_C	-4	A
I_{CM}	-10	A
V_{CBO}	-180	V
V_{CEO}	-140	V
V_{EBO}	-7	V



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage temperature range	T_{stg}	-55-150	°C
Operating junction temperature	T_j	150	°C
Collector-base voltage	V_{CBO}	-180	V
Collector-emitter voltage	V_{CEO}	-140	V
Emitter-base voltage	V_{EBO}	-7	V
Collector current	I_C	-4	A
Total power dissipation	Note 1	3.0	W
	Note 2	1.6	
Thermal resistance from junction to ambient	Note 1	42	°C/W
	Note 2	78	

Note:

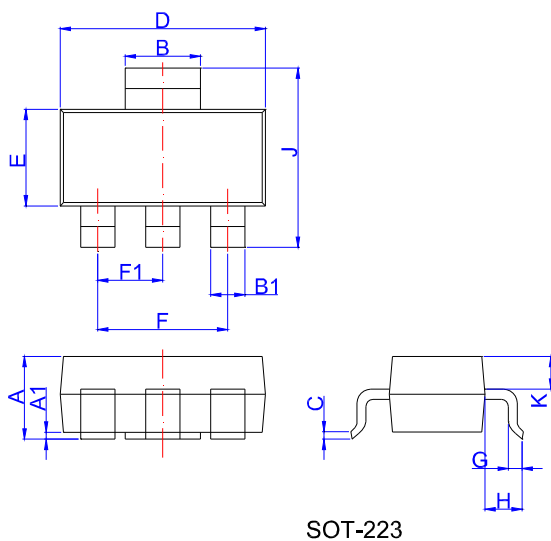
- 1.For a device mounted with the collector lead on 52mm x 52mm 2oz copper that is on a single-sided 1.6mm FR4 PCB; device is measured under still air conditions whilst operating in steady-state.
- 2.Same as Note1, except the device is mounted on 25mm x 25mm 1oz copper.

ELECTRICAL CHARACTERISTICS ($T_j=25^\circ\text{C}$ unless otherwise specified)

Parameter	Test Condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
Collector-base breakdown voltage	$I_C=-100\mu\text{A}, I_E=0$	$V_{(BR)CBO}$	-180	-210	-	V
Collector-emitter breakdown voltage	$I_C=-10\text{mA}, I_B=0$	$V_{(BR)CEO}$	-140	-170	-	V
Emitter-base breakdown voltage	$I_E=-100\mu\text{A}, I_C=0$	$V_{(BR)EBO}$	-7	-	-	V
Collector cut-off current	$V_{CB}=-150\text{V}, I_E=0$	I_{CBO}	-	-	-1	μA
Emitter cut-off current	$V_{EB}=-6\text{V}, I_C=0$	I_{EBO}	-	-	-1	μA
DC current gain (Note 3)	$V_{CE}=-5\text{V}, I_C=-10\text{mA}$	h_{FE}	100	200	-	
	$V_{CE}=-5\text{V}, I_C=-1\text{A}$		100	200	300	
	$V_{CE}=-5\text{V}, I_C=-3\text{A}$		75	140	-	
	$V_{CE}=-5\text{V}, I_C=-10\text{A}$		-	10	-	
Collector-emitter saturation voltage (Note 3)	$I_C=-100\text{mA}, I_B=-5\text{mA}$	$V_{CE(sat)}$	-	-30	-60	mV
	$I_C=-500\text{mA}, I_B=-50\text{mA}$		-	-70	-120	
	$I_C=-1\text{A}, I_B=-100\text{mA}$		-	-110	-150	
	$I_C=-3\text{A}, I_B=-300\text{mA}$		-	-275	-370	
Base-emitter saturation voltage (Note 3)	$I_C=-3\text{A}, I_B=-300\text{mA}$	$V_{BE(sat)}$	-	-970	-1110	mV
Transition frequency(Note 3)	$V_{CE}=-10\text{V}, f=50\text{MHz},$ $I_C=-100\text{mA}$	f_T	30	-	-	MHz
Collector output capacitance	$V_{CB}=-20\text{V}, I_E=0,$ $f=1\text{MHz}$	C_{ob}	-	40	-	pF

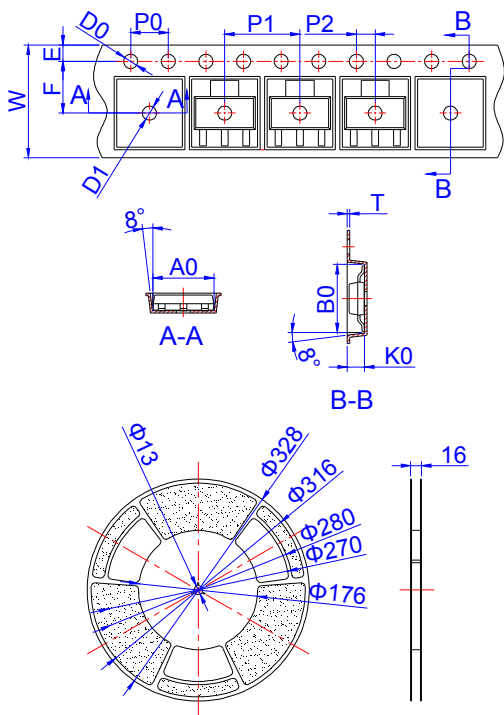
Note:3. Measured under pulsed conditions. Pulse width $\leq 300\mu\text{s}$. Duty cycle $\leq 2\%$.

PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.5	1.6	1.8	0.059	0.063	0.071
A1	0.01	0.06	0.10	0.001	0.002	0.004
B	2.9	3.0	3.1	0.114	0.118	0.122
B1	0.6	0.7	0.8	0.024	0.028	0.031
C	0.22	0.26	0.32	0.009	0.010	0.013
D	6.3	6.5	6.7	0.248	0.256	0.264
E	3.3	3.5	3.7	0.130	0.138	0.146
F		4.6			0.181	
F1		2.3			0.091	
G	0.7	0.9	1.1	0.028	0.035	0.043
H	1.5	1.75	2.0	0.059	0.069	0.079
J	6.7	7.0	7.3	0.264	0.276	0.287
K	0.8	0.9	1.0	0.031	0.035	0.039

INFORMATION OF TAPE & REEL



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	12.00		12.20	0.472		0.483
E	1.65	1.75	1.85	0.065	0.069	0.073
F	5.45	5.50	5.55	0.214	0.217	0.219
D0	1.50		1.60	0.059		0.063
D1	1.55		1.80	0.061		0.071
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	7.90	8.00	8.10	0.311	0.315	0.319
P2	1.95	2.00	2.05	0.077	0.079	0.081
10P0	39.80	40.00	40.20	1.567	1.575	1.583
A0	6.73	6.83	6.93	0.265	0.269	0.273
B0	7.30	7.40	7.50	0.287	0.291	0.295
K0	1.78	1.88	1.98	0.070	0.074	0.078
T	0.25	0.30	0.35	0.010	0.012	0.014

OUTLINE	PACKAGE	REEL (PCS)	DESCRIPTION
TAPING	SOT-223	4,000	13 inch reel pack

FIG.1 Collector-emitter voltage versus collector current

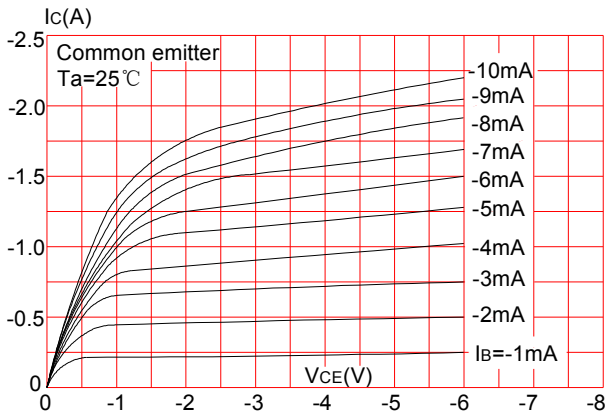


FIG.2: Collector current versus DC current gain

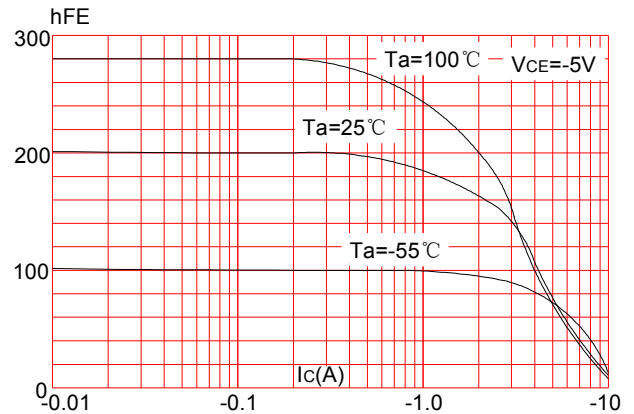


FIG.3: Collector current versus collector emitter saturation voltage

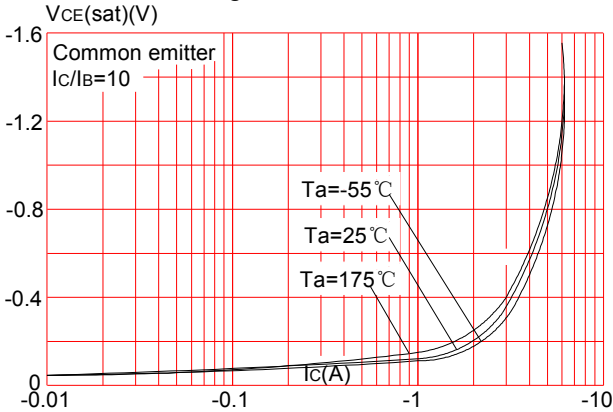


FIG.4 Typical transfer characteristics

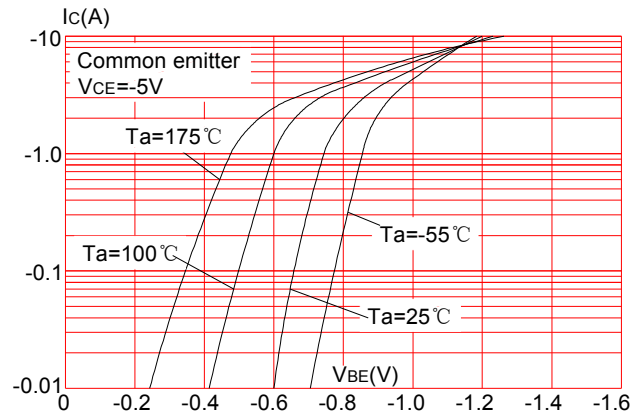


FIG.5: Area of safe operation

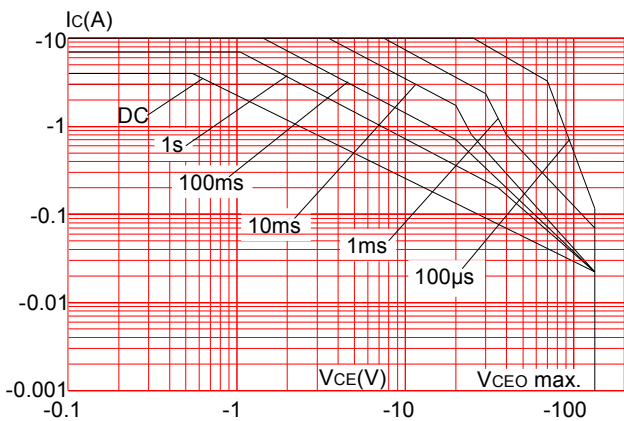
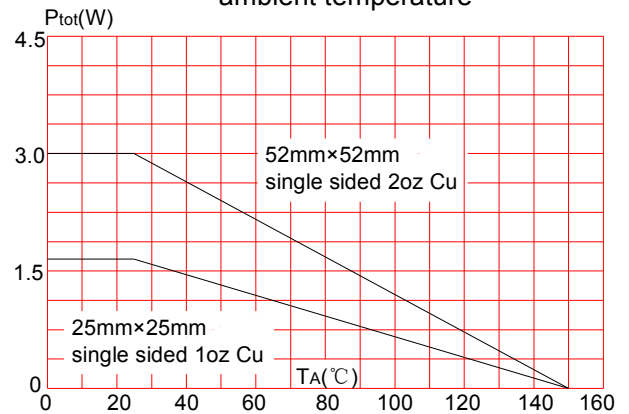


FIG.6 Total power dissipation versus ambient temperature




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