Features

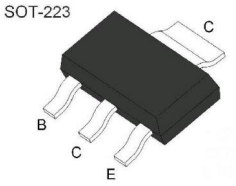
- High DC Current Gain
- Built-in a Damper Diode at E-C
- Complementary to CZT127

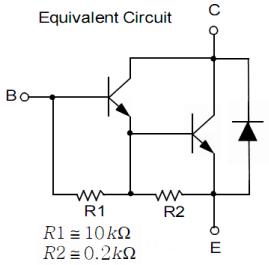


LOGO GK XXX CODE

Applications

- Medium Power Linear Switching





Absolute Maximum Rating (Ta=25℃)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current(DC)	I_C	5	A
Collector Dissipation,Ta =25 ℃	P_C	1	W
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55～150	℃

Electrical Characteristics (T_J=25℃unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter sustaining voltage	$V_{CEO(sus)}$	I_C = 30mA，I_B = 0	100			V
Collector cut-off current	I_{CBO}	V_{CB} = 100V，I_E = 0			0.2	mA
Collector cut-off current	I_{CEO}	V_{CE} = 50V，I_E = 0			0.5	mA
Emitter cut-off current	I_{EBO}	V_{EB} = 5V，I_C = 0			2	mA
DC current gain*	h_{FE}	V_{CE}= 3V，I_C= 0.5A V_{CE}= 3V，I_C= 3A V_{CE}= 3V，I_C=5A	500 1000 200			
Collector-emitter saturation voltage*	$V_{CE(sat)}$	I_C =3A，I_B = 12mA I_C =5A，I_B = 20mA			2 4	V
Base-emitter on voltage*	$V_{BE\ (on)}$	V_{CE}= 3V，I_C= 3A			2.5	V
Current gain bandwidth product	f_T	V_{CE}= 10V，I_C=0.75A	25			MHz
Output capacitance	C_{ob}	V_{CE}= 10V，f=1MHz			100	pF

* Pulse Test：PW≤300μs, Duty cycle≤2%

RATING AND CHARACTERISTIC CURVES

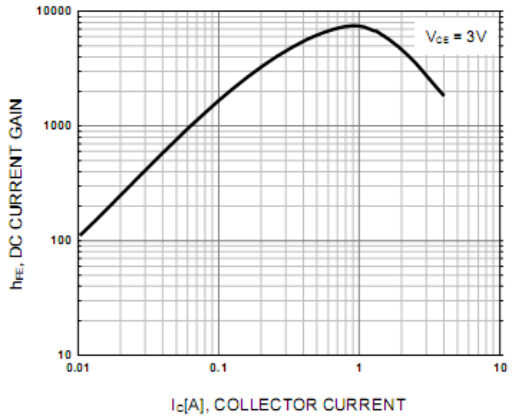


Figure 1. DC current Gain

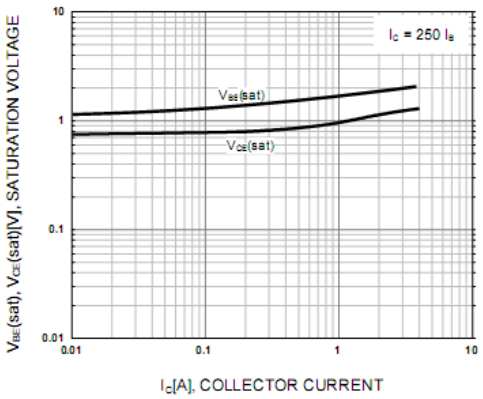


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

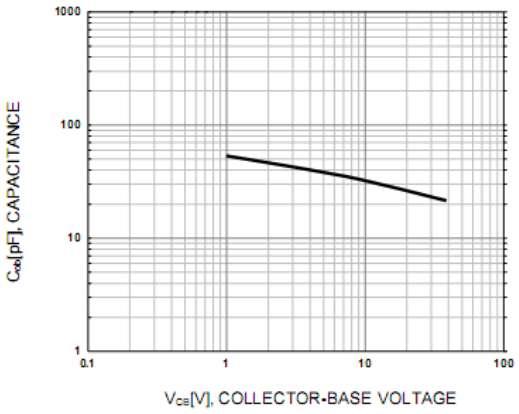


Figure 3. Collector Output Capacitance

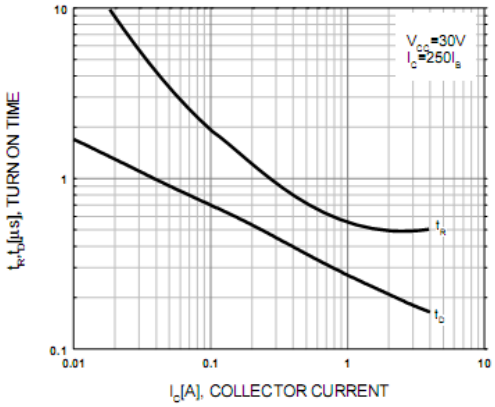


Figure 4. Turn On Time

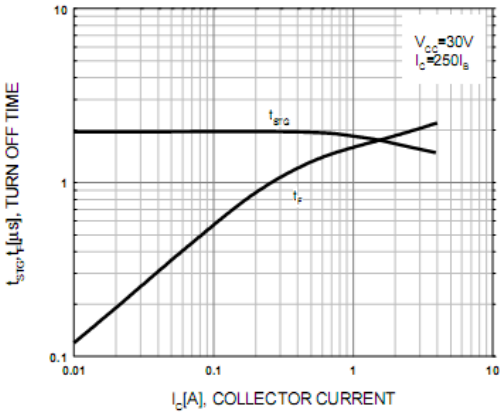


Figure 5. Turn Off Time

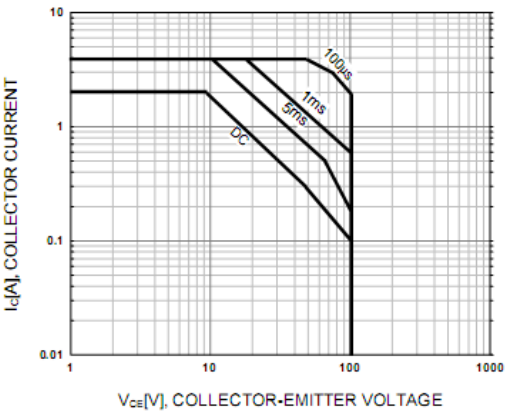
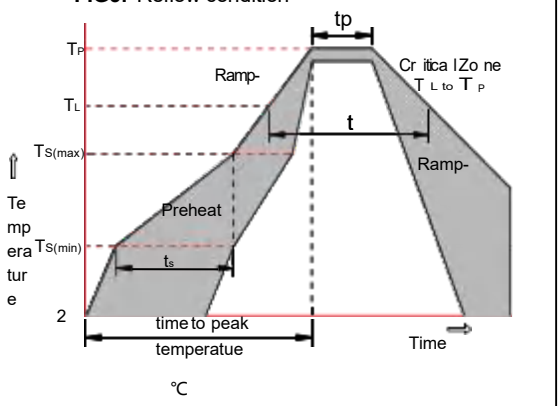


Figure 6. Safe Operating Area

Soldering parameters

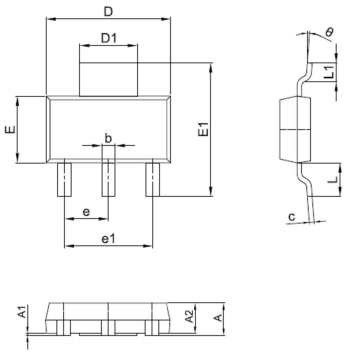
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid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

FIG5: Reflow condition

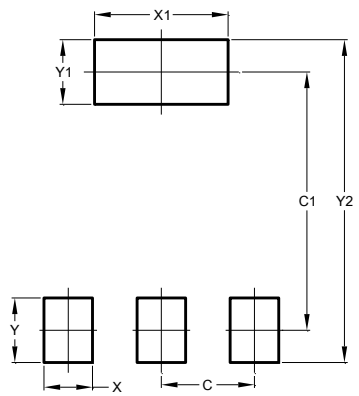


Package Dimensions & Suggested Pad Layout

SOT-223



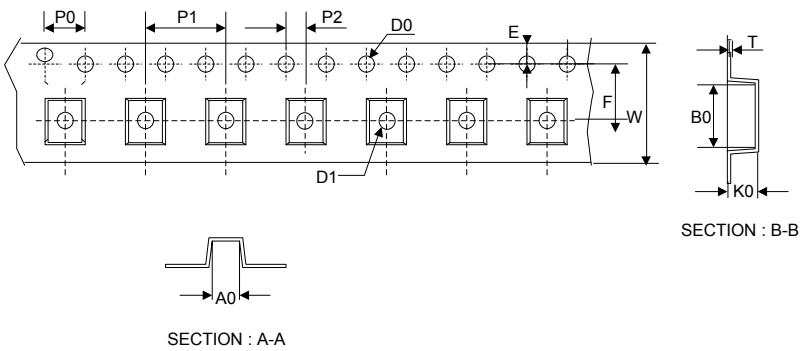
Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
b	0.65	0.75	0.026	0.030
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	1.65	1.85	0.065	0.073
L1	0.90	1.15	0.035	0.045



Dimensions	Value (in mm)
C	2.30
C1	6.00
X	1.20
X1	3.60
Y	1.70
Y1	1.70
Y2	7.70

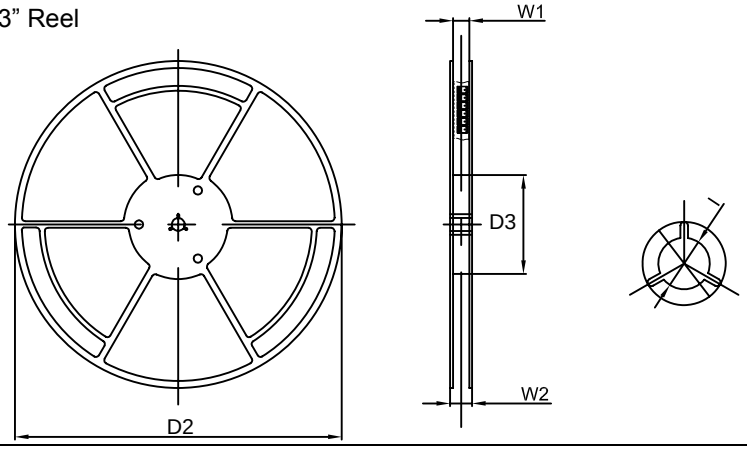
Tape & rell specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	8.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	1.55±0.20
E	1.75±0.20
F	5.50±0.20
W	12.00±0.20
A0	7.40±0.20
B0	7.50±0.20
K0	2.10±0.20
T	0.20±0.20

13” Reel



D2	330.0±5.0
D3	100.0±4.0
W1	18.0±5.0
W2	22.0±5.0
I	13.0±2.0

Quantity: 2500PCS