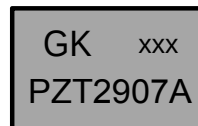


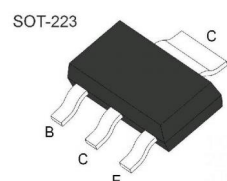
Features

Epitaxial planar die construction

Complementary NPN Type available(PZT2222A)



LOGO GK xxx CODE



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

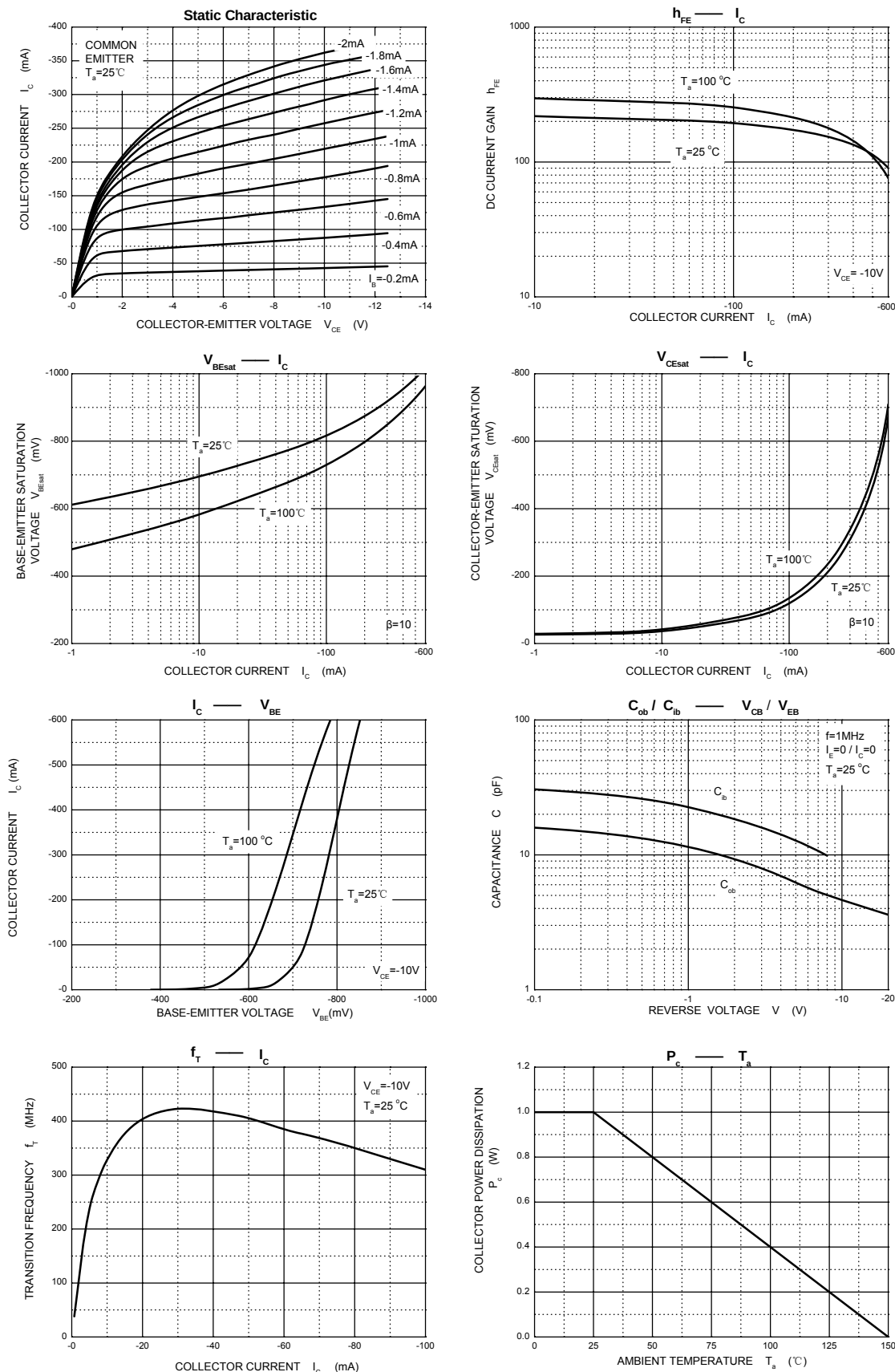
Absolute Maximum Ratings (Ta=25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-0.6	A
P_C	Collector Power Dissipation	1	W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

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

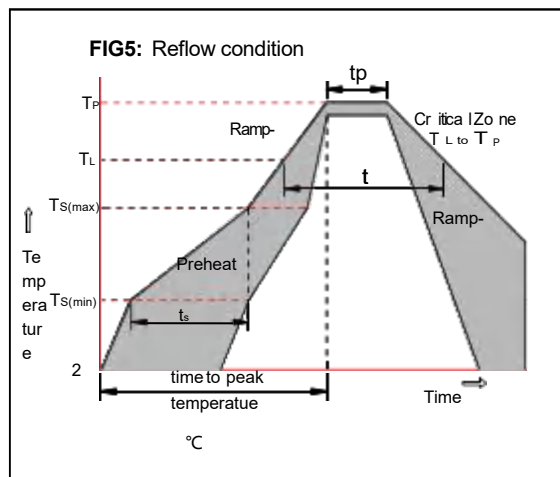
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -50V, I_E = 0$			-10	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-50	nA
DC current gain	$h_{FE(1)}$	$V_{CE} = -10V, I_C = -0.1mA$	75			
	$h_{FE(2)}$	$V_{CE} = -10V, I_C = -1mA$	100			
	$h_{FE(3)}$	$V_{CE} = -10V, I_C = -10mA$	100			
	$h_{FE(4)}$	$V_{CE} = -10V, I_C = -150mA$	100		300	
	$h_{FE(5)}$	$V_{CE} = -10V, I_C = -500mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -150mA, I_B = -15mA$			-0.4	V
	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$			-1.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -150mA, I_B = -15mA$			-1.3	V
	$V_{BE(sat)}$	$I_C = -500mA, I_B = -50mA$			-2.6	V
Transition frequency	f_T	$V_{CE} = -20V, I_C = -50mA, f = 100MHz$	200			MHz
Collector capacitance	C_c	$V_{CB} = -10V, I_E = 0, f = 1MHz$			8	pF
Emitter capacitance	C_E	$V_{EB} = -2V, I_C = 0, f = 1MHz$			30	pF
Delay time	t_d	$I_C = -150mA \quad I_{B1} = -I_{B2} = -15mA$			12	ns
Rise time	t_r				30	ns
Storage time	t_s				300	ns
Fall time	t_f				65	ns

RATING AND CHARACTERISTIC CURVES



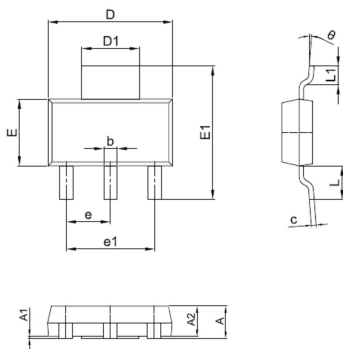
Soldering parameters

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

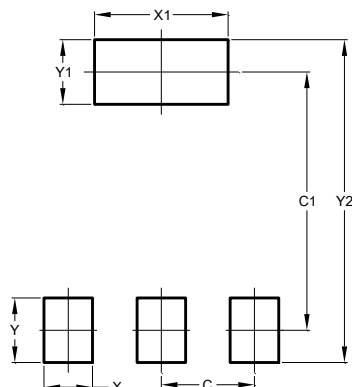


Package Dimensions & Suggested Pad Layout

SOT-223

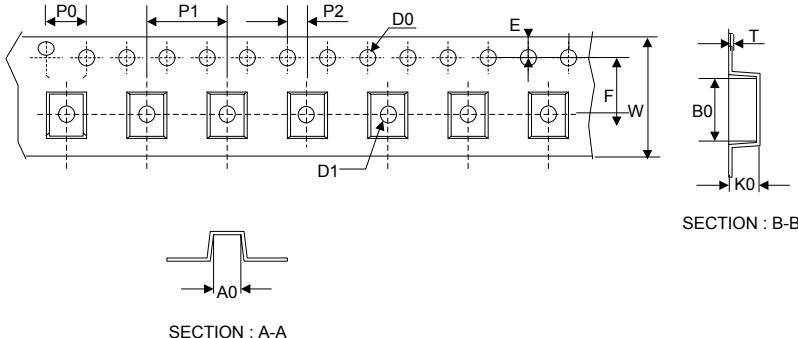
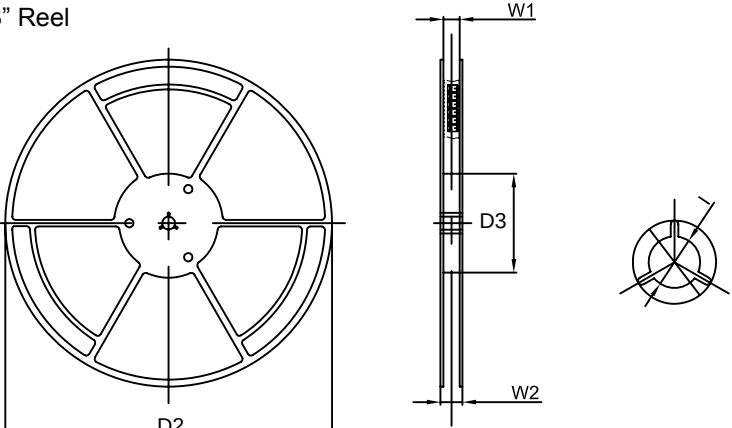


Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
b	0.65	0.75	0.026	0.030
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	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 & reel specification

Tape		Symbol	Dimension (mm)
 SECTION : A-A SECTION : B-B		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
		D2	330.0±5.0
		D3	100.0±4.0
13" Reel		W1	18.0±5.0
		D3	100.0±4.0
		W2	22.0±5.0
		I	13.0±2.0
		Quantity: 2500PCS	