TY Semicondutor® **TY**

PZT2222A

■ Features

● High current (max. 600 mA)
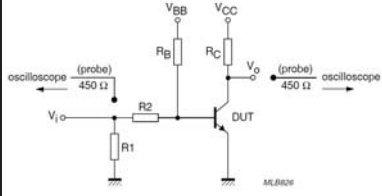
● Low voltage (max.40 V).

SOT-223 Unit: mm

6.50 | 3.50 | 0.90 | 1.65 | 0.11 max | 0.90 | 7.00 | 3.00 | 2.9 | 4.6 | 0.70

4

1 2 3

1 Base

2 Collector

3 Emitter
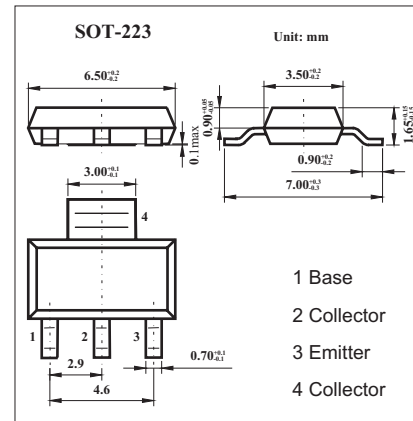
4 Collector

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	75	V
Collector-emitter voltage	V_{CEO}	40	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	600	mA
Peak collector current	I_{CM}	800	mA
Peak base current	I_{BM}	200	mA
Total power dissipation Ta≤25℃	P_{tot}	1	W
Storage temperature	T_{stg}	-65 to +150	℃
Junction temperature	T_j	150	℃
Operating ambient temperature	T_{amb}	-65 to +150	℃
Thermal resistance from junction to ambient	$R_{th(j-a)}$	109	K/W
Thermal resistance from junction to soldering point	$R_{th(j-s)}$	28	K/W

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$I_E = 0$; $V_{CB} = 60$ V			10	nA
		$I_E = 0$; $V_{CB} = 60$ V; $T_j = 125$ ℃			10	μ A
Emitter cutoff current	I_{EBO}	$I_C = 0$; $V_{EB} = 5$ V			10	nA
DC current gain	h_{FE}	$I_C = 0.1$ mA; $V_{CE} = 10$ V	35			
		$I_C = 1$ mA; $V_{CE} = 10$ V	50			
		$I_C = 10$ mA; $V_{CE} = 10$ V	75			
		$I_C = 10$ mA; $V_{CE} = 10$ V;$T_a = -55$ ℃	35			
		$I_C = 150$ mA; $V_{CE} = 1$ V *	50			
		$I_C = 150$ mA; $V_{CE} = 10$ V *	100		300	
		$I_C = 500$ mA; $V_{CE} = 10$ V *	40			
collector-emitter saturation voltage	V_{CEsat}	$I_C = 150$ mA; $I_B = 15$ mA			300	mV
		$I_C = 500$ mA; $I_B = 50$ mA			1	V
base-emitter saturation voltage	V_{BEsat}	$I_C = 150$ mA; $I_B = 15$ mA	0.6		1.2	V
		$I_C = 500$ mA; $I_B = 50$ mA			2	V
Collector capacitance	C_c	$I_E = i_E = 0$; $V_{CB} = 10$ V; f = 1 MHz			8	pF
Emitter capacitance	C_e	$I_C = i_C = 0$; $V_{EB} = 500$ mV; f = 1 MHz			25	pF
Turn-on time	t_{on}	$I_{Con} = 150$ mA; $I_{Bon} = 15$ mA; $I_{Boff} = -15$ mA			35	ns
Delay time	t_d				10	ns
Rise time	t_r				25	ns
Turn-off time	t_{off}				250	ns
Storage time	t_s	$V_i = 9.5$ V; T = 500 μs; $t_p = 10$ μs; $t_r = t_f \leqslant 3$ ns. R1 = 68 Ω; R2 = 325 Ω; $R_B = 325$ Ω; $R_C = 160$ Ω.			200	ns
Fall time	t_f	$V_{BB} = -3.5$ V; $V_{CC} = 29.5$ V. Oscilloscope input impedance $Z_i = 50$ Ω.			60	ns
Transition frequency	f_T	$I_C = 20$ mA; $V_{CE} = 20$ V; f = 100 MHz	300			MHz

* Pulse test: tp $\leqslant$ 300 μs; δ $\leqslant$ 0.02.

■ Marking

Marking	2222A