



## SOT-23 Plastic-Encapsulate Transistors

### KTC4075 TRANSISTOR (NPN )

#### FEATURES

Power dissipation

$$P_{CM} : 0.1 \text{ W ( } T_{amb}=25 \text{ )}$$

Collector current

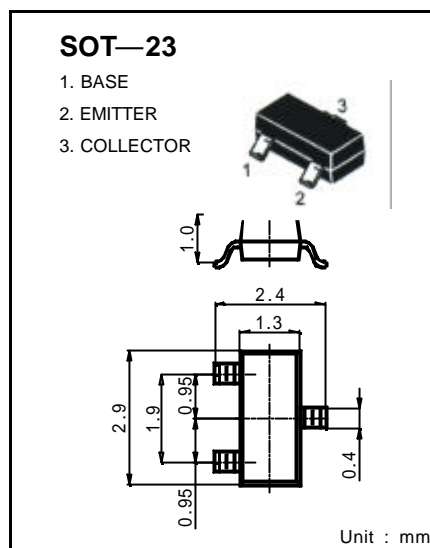
$$I_{CM} : 0.15 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : 60 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg} : -55 \text{ to } +150$$



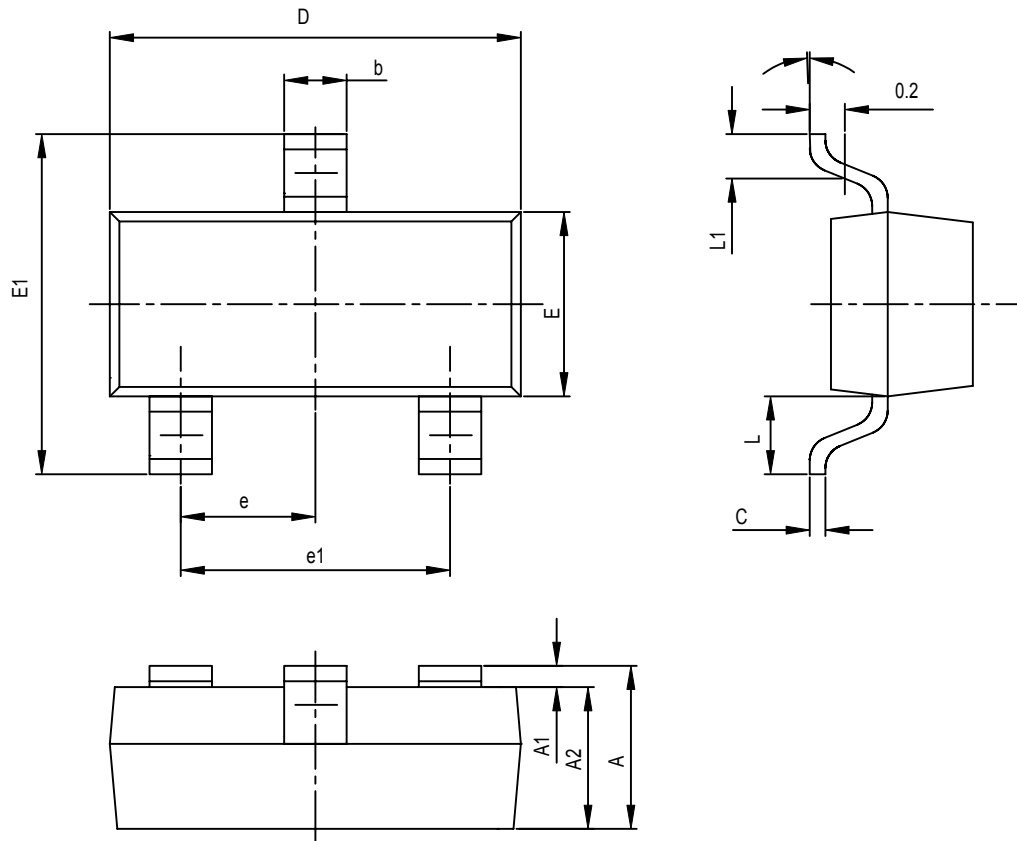
#### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25$ unless otherwise specified )

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu A, I_E = 0$	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 mA, I_B = 0$	50		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu A, I_C = 0$	5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 60 V, I_E = 0$		0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$		0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = 6V, I_C = 2mA$	70	700	
Collector-emitter saturation voltage	$V_{CEsat}$	$I_C = 100mA, I_B = 10mA$		0.25	V
Transition frequency	$f_T$	$V_{CE} = 10V, I_C = 1mA$	80		MHz
Collector output capacitance	$C_{ob}$	$V_{CE} = 10V, I_E = 0, f = 1MHz$		3.5	dB
Noise figure	NF	$V_{CE} = 6V, I_E = 0.1mA, f = 1KHz, R_G = 10K?$		10	dB

#### CLASSIFICATION OF $h_{FE}$

Rank	O	Y	GR	BL
Range	70~140	120~240	200~400	350~700
Marking	LO	LY	LGR	LBL

## SOT-23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TPY		0.037TPY	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°