

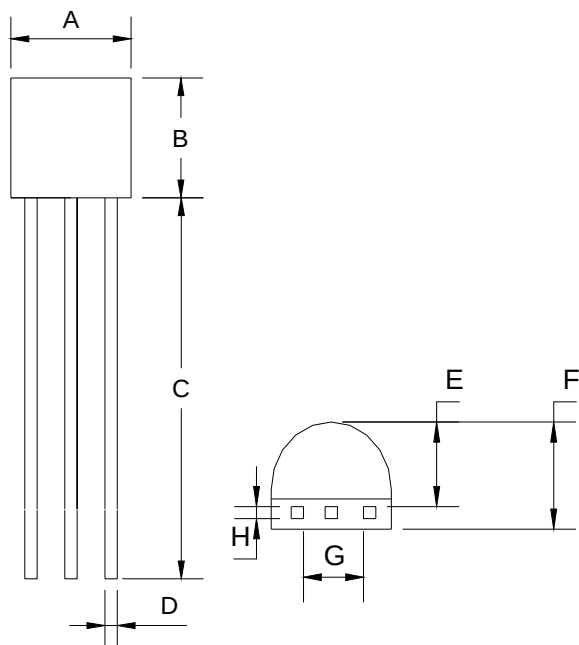
TSC 	TS13001 High Voltage NPN Transistor								
TO-92  Pin assignment: 1. Emitter 2. Collector 3. Base		$BV_{CEO} = 400V$ $BV_{CBO} = 500V$ $I_c = 0.1A$ $V_{CE(SAT)}, = 0.5V @ I_c / I_b = 50mA / 10mA$							
Features ✧ High voltage. ✧ High speed switching		Ordering Information <table><tr><th>Part No.</th><th>Packing</th><th>Package</th></tr><tr><td>TS13001CT</td><td>Bulk</td><td>TO-92</td></tr></table>		Part No.	Packing	Package	TS13001CT	Bulk	TO-92
Part No.	Packing	Package							
TS13001CT	Bulk	TO-92							
Structure ✧ Silicon triple diffused type. ✧ NPN silicon transistor									
Absolute Maximum Rating (Ta = 25 °C unless otherwise noted)									
Parameter		Symbol	Limit	Unit					
Collector-Base Voltage		V_{CBO}	500V	V					
Collector-Emitter Voltage		V_{CEO}	400V	V					
Emitter-Base Voltage		V_{EBO}	9	V					
Collector Current	DC	I_c	0.1	A					
	Pulse		0.3						
Collector Power Dissipation	TO-92	P_D	0.6	W					
Operating Junction Temperature		T_J	+150	°C					
Operating Junction and Storage Temperature Range		T_{STG}	- 55 to +150	°C					

Note: 1. Single pulse, Pw = 5mS, Duty <= 10%

Electrical Characteristics						
Ta = 25 °C unless otherwise noted						
Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Static						
Collector-Base Voltage	$I_C = 10mA, I_B = 0$	BV_{CBO}	500	--	--	V
Collector-Emitter Breakdown Voltage	$I_C = 10mA, I_E = 0$	BV_{CEO}	400	--	--	V
Emitter-Base Breakdown Voltage	$I_E = 1mA, I_C = 0$	BV_{EBO}	9	--	--	V
Collector Cutoff Current	$V_{CB} = 500V, I_E = 0$	I_{CBO}	--	--	100	uA
Emitter Cutoff Current	$V_{EB} = 7V, I_C = 0$	I_{EBO}	--	--	0.01	uA
Collector-Emitter Saturation Voltage	$I_C / I_B = 50mA / 10mA$	$V_{CE(SAT)}$	--	--	0.5	V
DC Current Gain	$V_{CE} = 5V, I_C = 20mA$	h_{FE}	10	--	40	
Output Capacitance	$V_{CB} = 10V, f = 0.1MHz$	Cob	--	4	--	pF
Storage Time	$V_{CE} = 250V, I_C = 5 Ib,$ $Ib1=Ib2=40mA$	ts	--	--	2.0	uS
Fall Time		tf	--	--	0.8	

Note : pulse test: pulse width <=5mS, duty cycle <=10%

TO-92 Mechanical Drawing



TO-92 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.30	4.70	0.169	0.185
B	4.30	4.70	0.169	0.185
C	14.30(typ)		0.563(typ)	
D	0.43	0.49	0.017	0.019
E	2.19	2.81	0.086	0.111
F	3.30	3.70	0.130	0.146
G	2.42	2.66	0.095	0.105
H	0.37	0.43	0.015	0.017