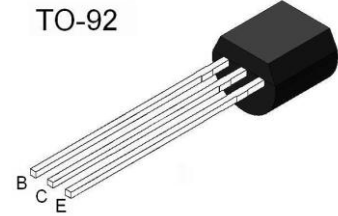




TO-92



### High Voltage Mode Application

- High Speed Switching
- Suitable for Switching Regulator and Motor Control

### Absolute Maximum Rating (Ta=25°C, unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$BV_{CBO}$	700	V
Collector-Emitter Voltage	$BV_{CEO}$	400	V
Emitter-Base Voltage	$BV_{EBO}$	9	V
Collector Current	$I_C$	0.25	A
Collector Power Dissipation (Ta=25°C)	$P_C$	0.9	W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55~150	°C

### Electrical Characteristics (Ta=25°C, unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$BV_{CBO}$	$I_C = 100\mu A, I_E = 0$	700			V
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C = 1mA, I_B = 0$	400			V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_E = 100\mu A, I_C = 0$	9			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 700V, I_E = 0$			0.1	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CE} = 400V, I_B = 0$			100	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 9V, I_C = 0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE} = 2V, I_C = 20mA$ $V_{CE} = 2V, I_C = 250mA$	8 5		40	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50mA, I_B = 10mA$			0.5	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_C = 50mA, I_B = 10mA$			1.2	V
Transition frequency	$f_T$	$V_{CE} = 10V, I_B = 0.1A$	8			MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10V, f = 1MHz$		4		pF

### Typical Characteristics

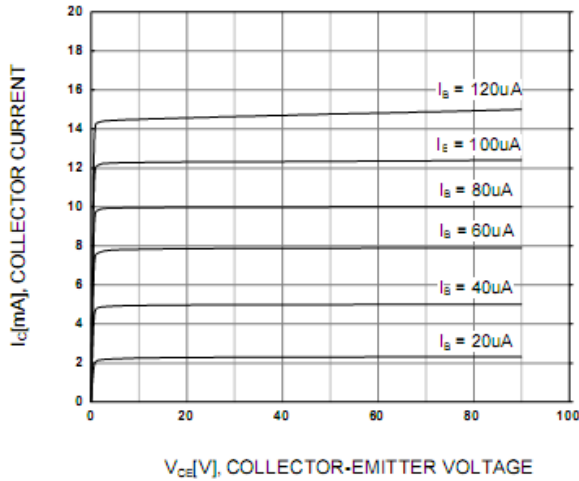


Figure 1. Static Characteristic

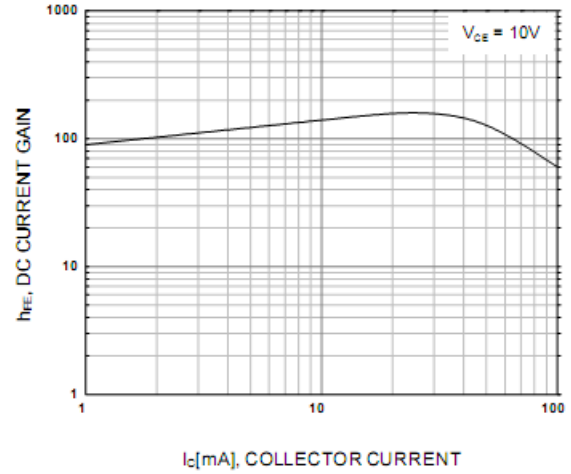


Figure 2. DC current Gain

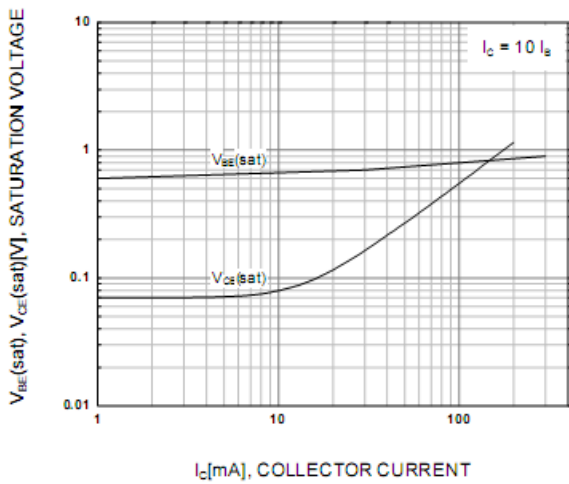


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

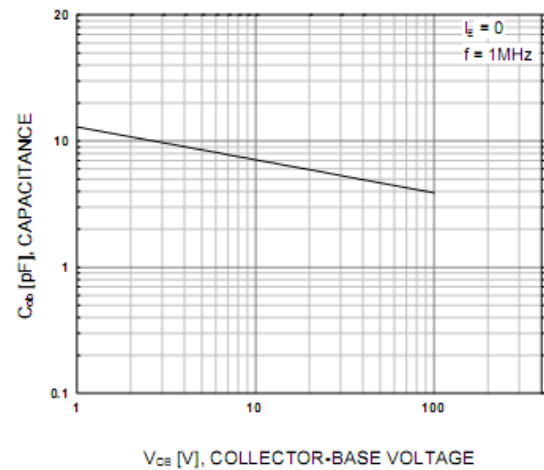


Figure 4. Collector Output Capacitance

### Package Dimensions

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
A1	2.30	2.70	0.091	0.106
b	0.40	0.50	0.016	0.020
b1	0.50	0.70	0.020	0.028
c	0.35	0.45	0.014	0.018
D	4.45	4.70	0.175	0.185
E	4.40	4.65	0.173	0.183
e	1.17	1.37	0.046	0.054
e1	2.34	2.64	0.092	0.104
L	13.50	14.50	0.531	0.571
L1	1.80	2.20	0.071	0.087

Package	Packing	Quantity	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	Bulk	1000pcs/BP	10,000pcs	245×170×100	100,000pcs	525×375×270
TO-92	Tape	2000pcs/TP	2000pcs	333×162×43	20,000pcs	350×340×250