



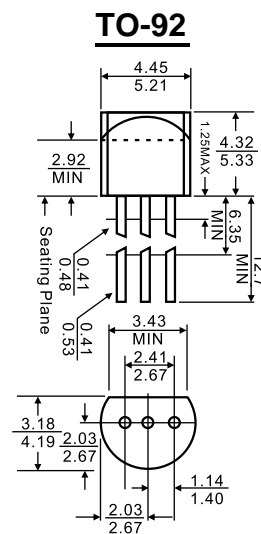
1. EMITTER
2. COLLECTOR
3. BASE

Features

- ◇ High Gain: $G_{pe}=33\text{dB(Typ)}$ ($f=45\text{MHz}$).
- ◇ Good linearity of h_{FE}

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current -Continuous	50	mA
P_C	Collector power dissipation	625	mW
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$



Dimensions in inches and (millimeters)

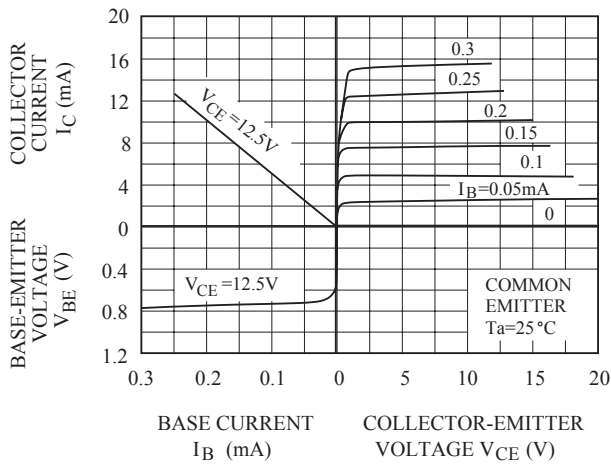
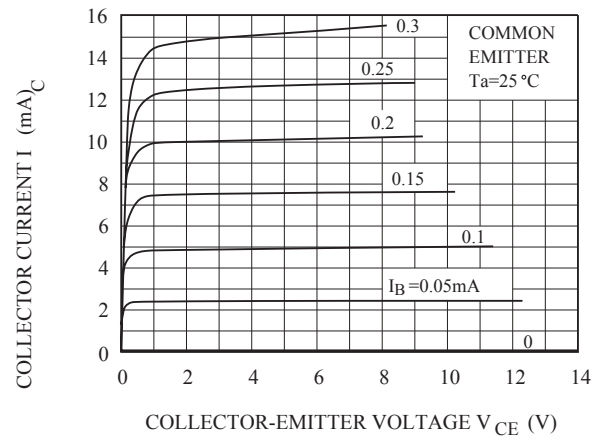
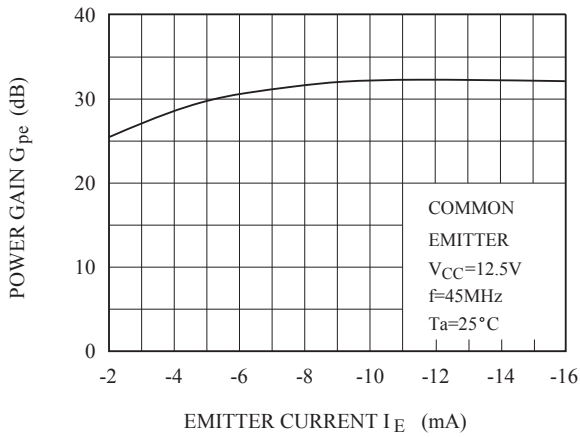
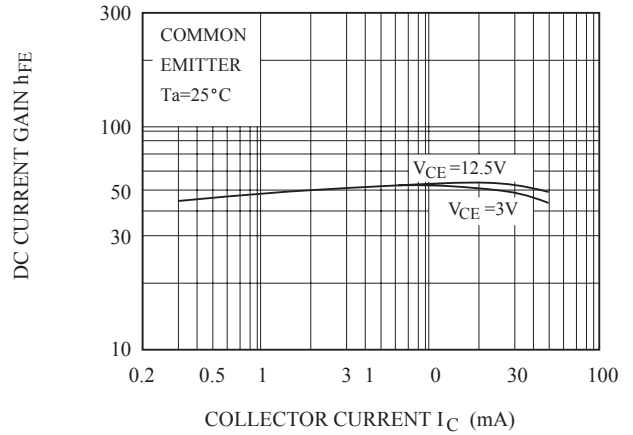
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\text{mA}, I_C=0$	4			V
Collector cut-off current	I_{CBO}	$V_{CB}=30\text{V}, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{V}, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=12.5\text{V}, I_C=12.5\text{mA}$	20		200	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=15\text{mA}, I_B=1.5\text{mA}$			0.2	V
Base-Emitter saturation voltage	$V_{BE(sat)}$	$I_C=15\text{mA}, I_B=1.5\text{mA}$			1.5	V
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	0.8		2	pF
Collector-base time constant	$C_c.r_{bb}$	$V_{CB}=10\text{V}, I_E=-1\text{mA}, f=30\text{MHz}$			25	pS
Transition frequency	f_T	$V_{CE}=12.5\text{V}, I_C=12.5\text{mA}$	300			MHz
Power gain	G_{pe}	$V_{CE}=12.5\text{V}, I_E=12.5\text{mA}, f=45\text{MHz}$	28		36	dB



Typical Characteristics

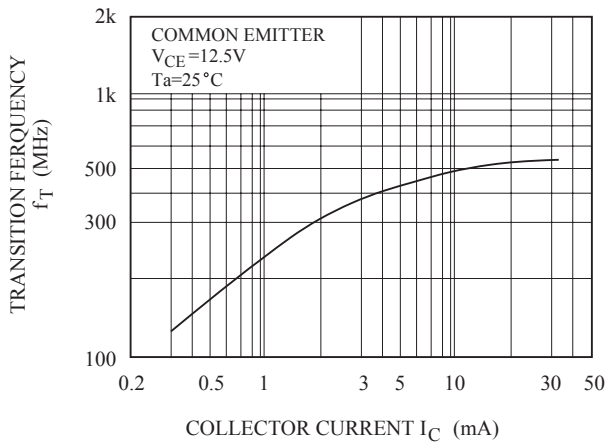
STATIC CHARACTERISTICS


 $I_C - V_{CE}$

 $G_{pe} - I_E$ (See Fig 1)

 $h_{FE} - I_C$


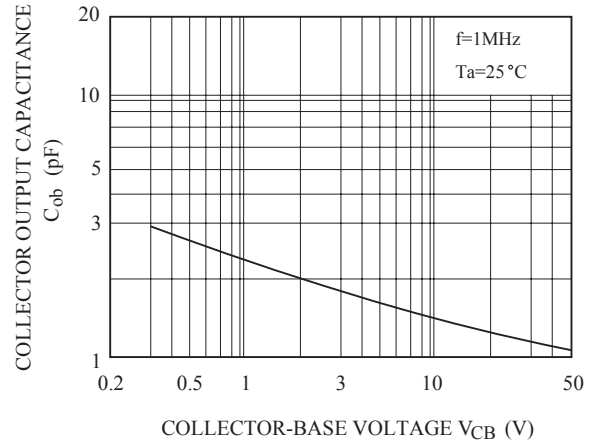


Typical Characteristics

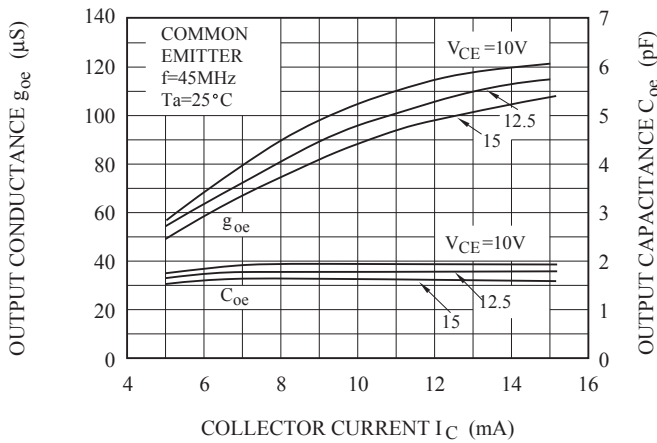
$f_T - I_C$



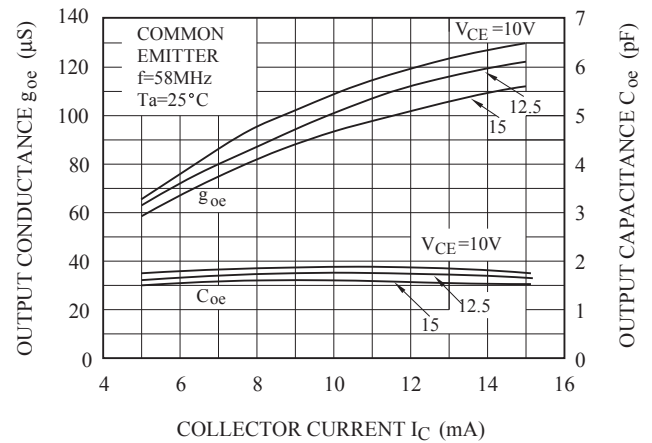
$C_{ob} - V_{CB}$



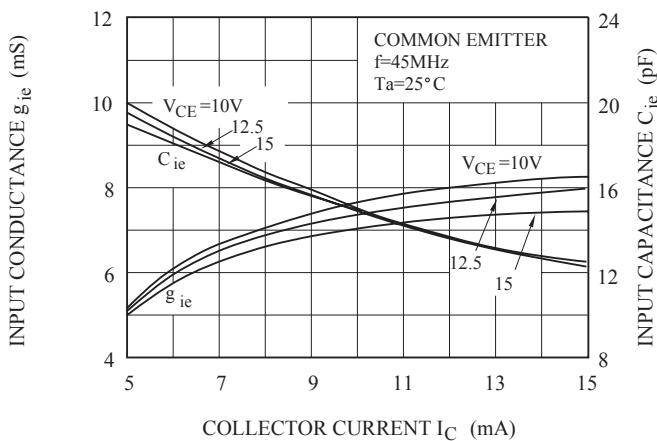
$g_{oe}, C_{oe} - I_C$



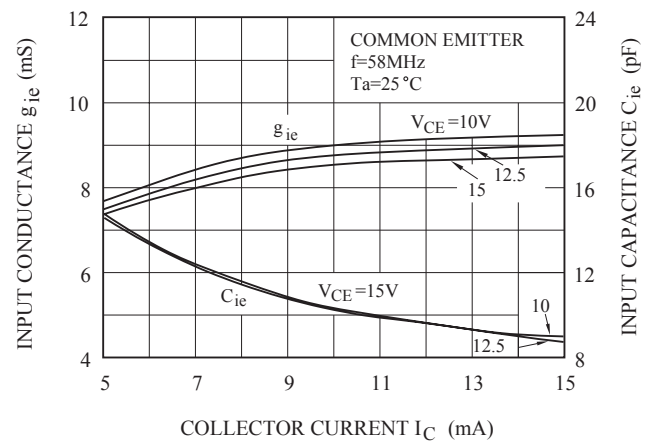
$g_{oe}, C_{oe} - I_C$



$g_{ie}, C_{ie} - I_C$

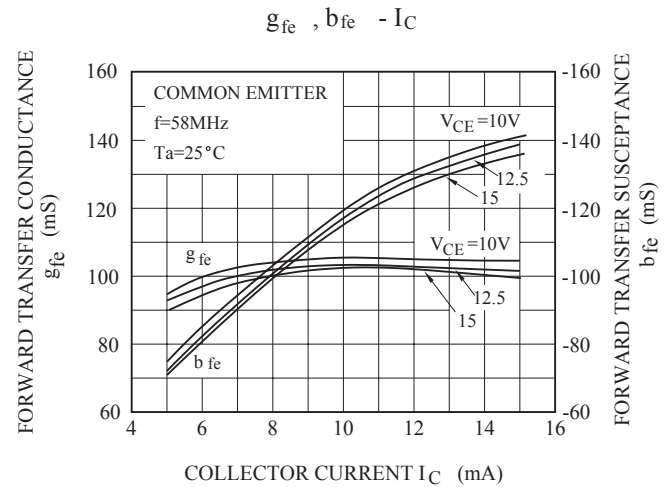
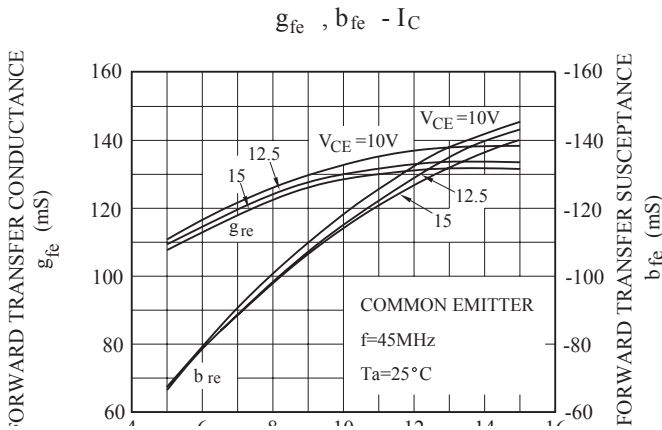
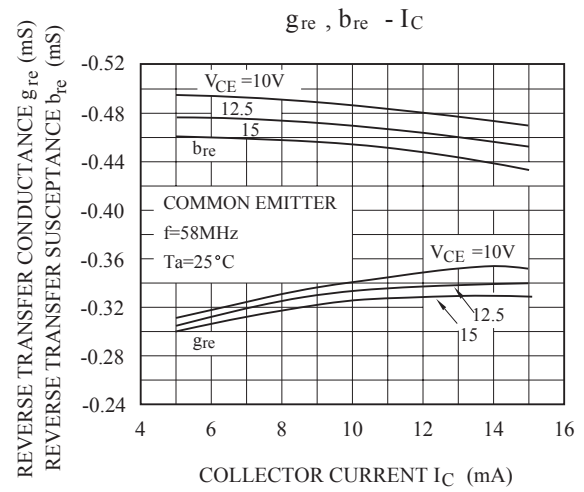
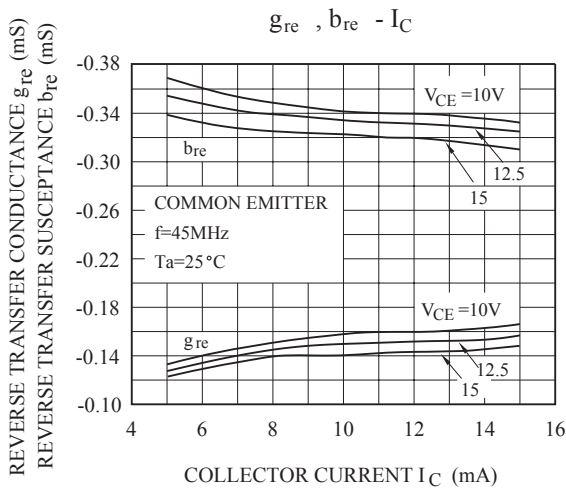


$g_{ie}, C_{ie} - I_C$





Typical Characteristics



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