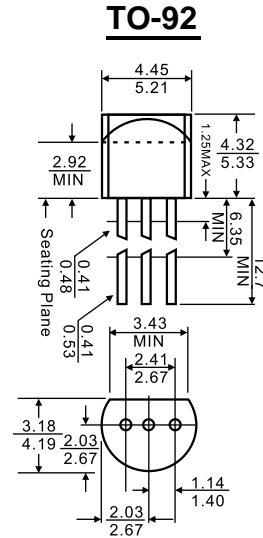




1. EMITTER
2. BASE
3. COLLECTOR



Dimensions in inches and (millimeters)

Features

◇ Complementary NPN Type available (MPS2222)

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

Symbol	Parameter	Value	Units
V_{CB0}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-0.6	A
P_C	Collector Power Dissipation	0.625	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$

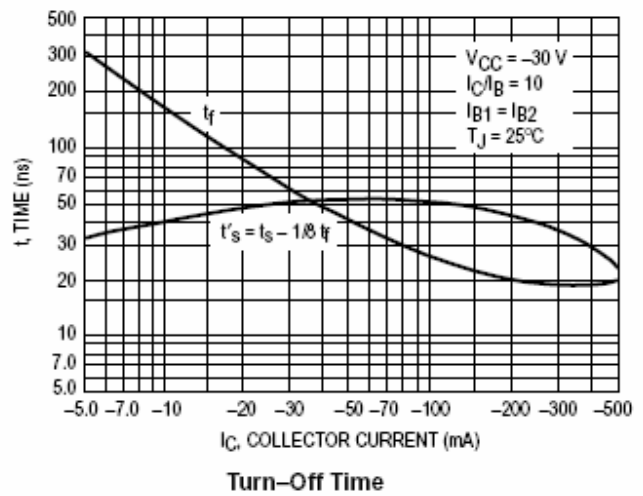
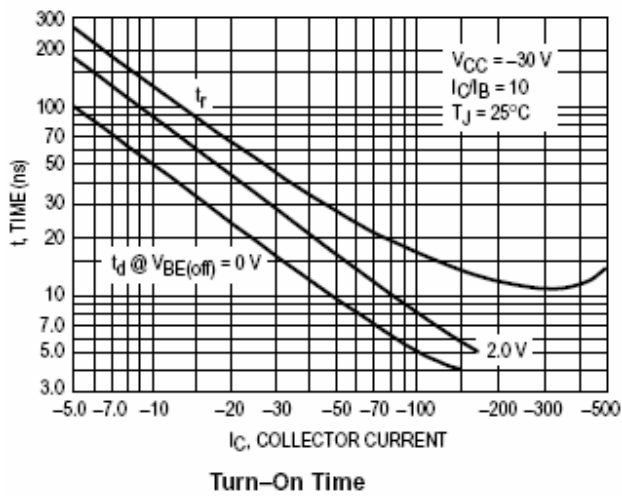
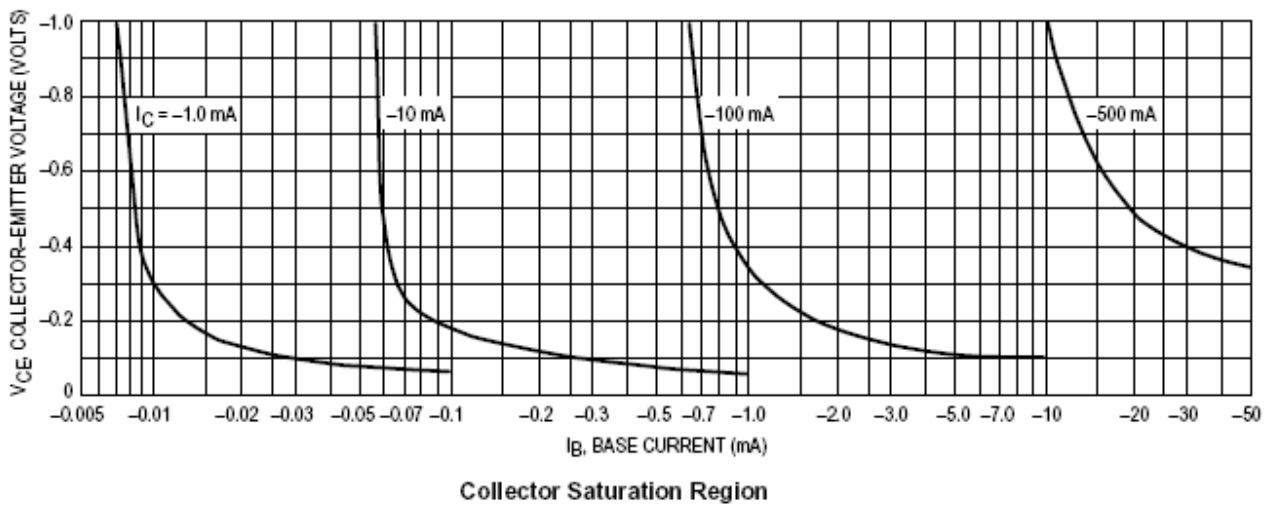
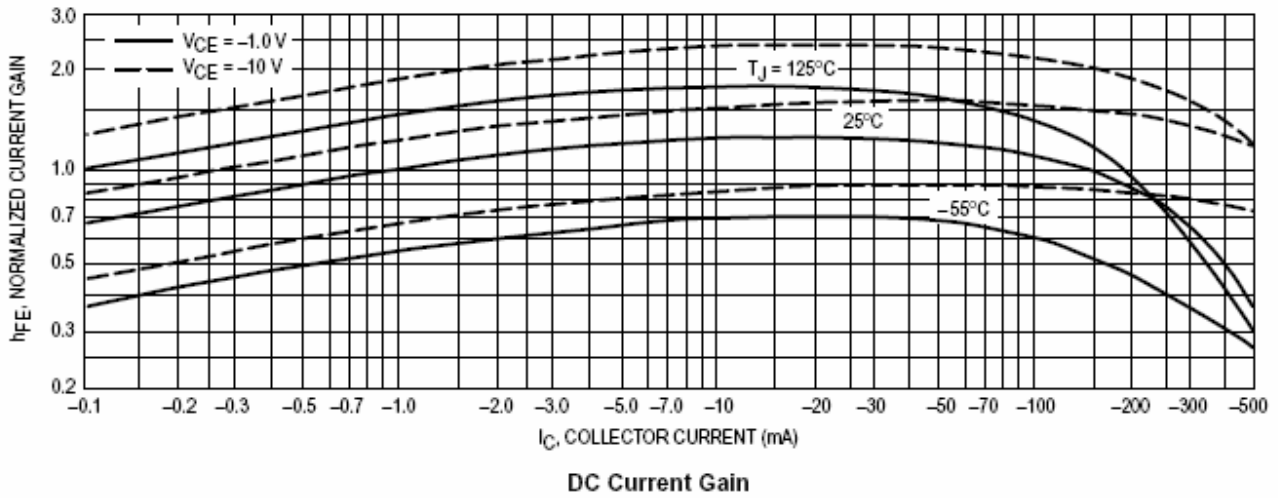
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

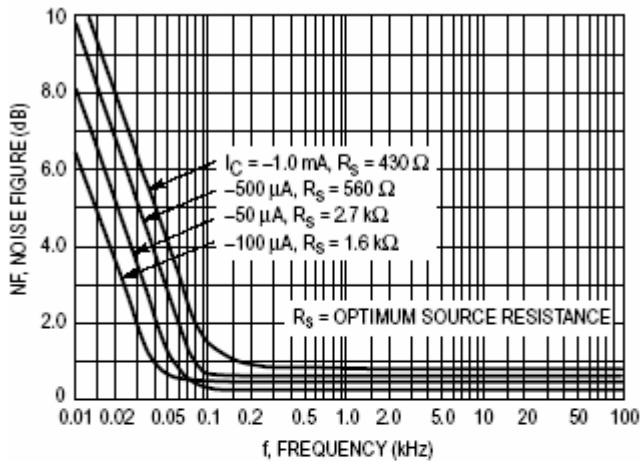
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10\text{mA}, I_B=0$	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-50\text{V}, I_E=0$			-10	nA
Collector cut-off current	I_{CEX}	$V_{CE}=-30\text{V}, V_{EB(off)}=-0.5\text{V}$			-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=-3\text{V}, I_C=0$			-10	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=-10\text{V}, I_C=-0.1\text{mA}$	52			
	$h_{FE(2)}$	$V_{CE}=-10\text{V}, I_C=-150\text{mA}$	100		300	
	$h_{FE(3)}$	$V_{CE}=-10\text{V}, I_C=-500\text{mA}$	32			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-150\text{mA}, I_B=-15\text{mA}$			-0.4	V
	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-0.67	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-150\text{mA}, I_B=-15\text{mA}$			-1	V
	$V_{BE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-1.2	V
Transition frequency	f_T	$V_{CE}=-20\text{V}, I_C=-50\text{mA}, f=100\text{MHz}$	200			MHz
Delay time	t_d	$V_{CC}=-30\text{V}, I_C=-150\text{mA}, I_{B1}=-15\text{mA}$			10	nS
Rise time	t_r				25	nS
Storage time	t_s				225	nS
Fall time	t_f	$I_{B1}=I_{B2}=-15\text{mA}$			60	nS

CLASSIFICATION OF $h_{FE(2)}$

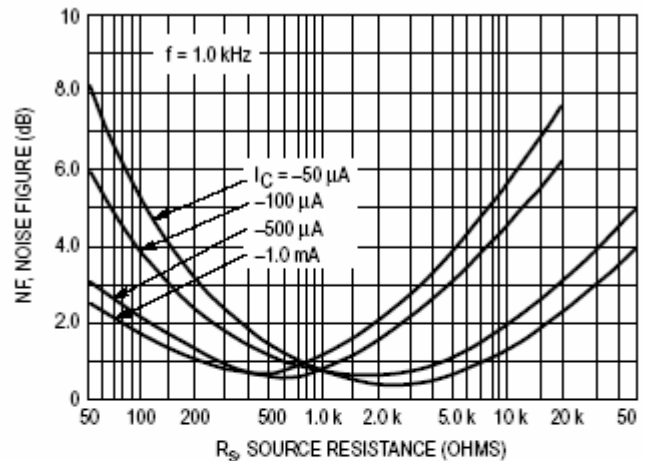
Rank	L	H
Range	100-200	200-300

Typical Characteristics

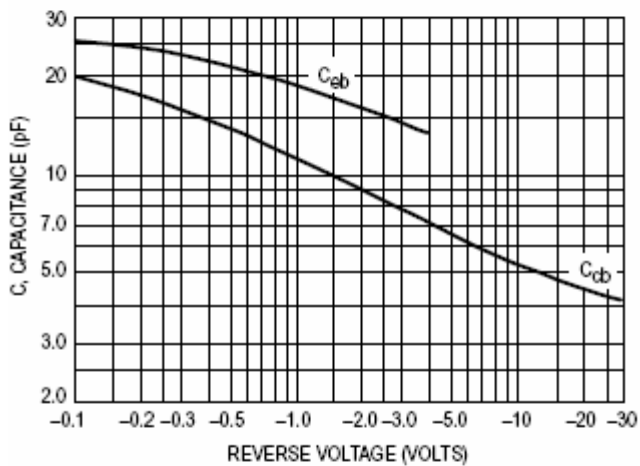




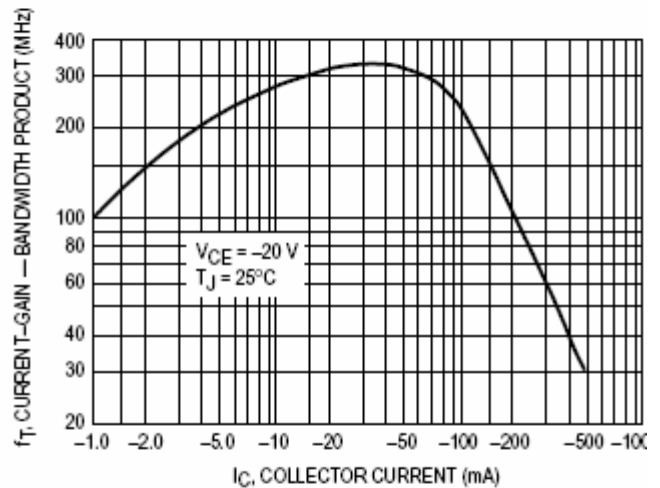
Frequency Effects



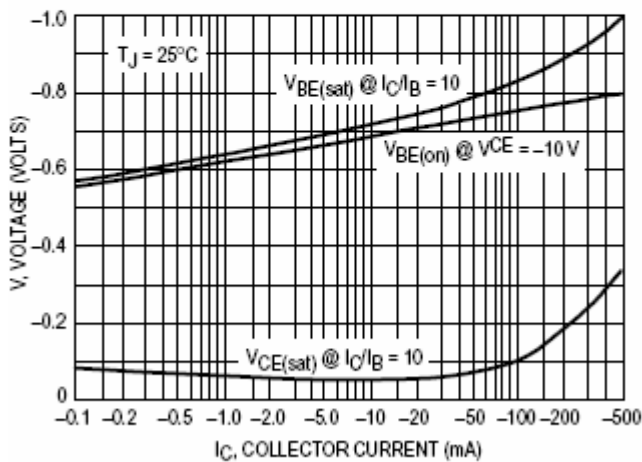
Source Resistance Effects



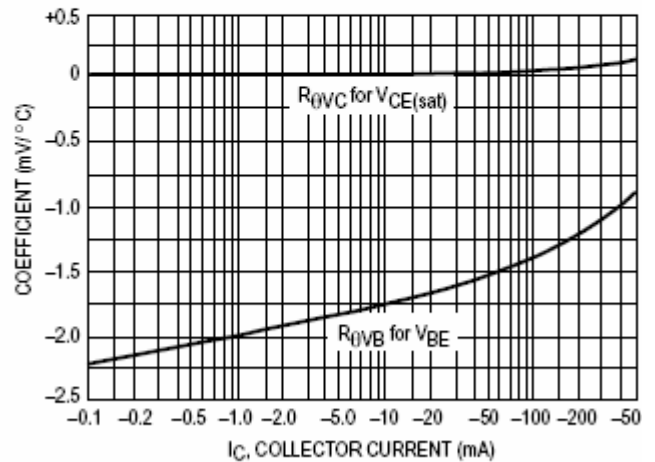
Capacitances



Current-Gain — Bandwidth Product



"On" Voltage



Temperature Coefficients