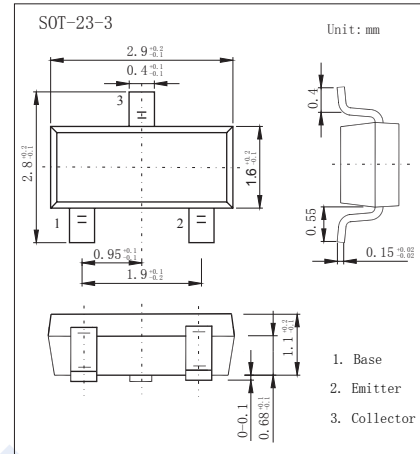


NPN Transistors

2SC3143-HF

■ Features

- High breakdown voltage
- Small output capacitance.
- Complementary to 2SA1257-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CB0}	180	V
Collector - Emitter Voltage	V _{CEO}	160	
Emitter - Base Voltage	V _{EBO}	5	
Collector Current - Continuous	I _c	80	mA
Collector Current - Pulse	I _{cp}	150	
Collector Power Dissipation	P _c	200	mW
Junction Temperature	T _J	125	°C
Storage Temperature Range	T _{stg}	-55 to 125	

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = 100 μA, I _E = 0	180			V
Collector- emitter breakdown voltage	V _{CEO}	I _c = 1 mA, R _{BE} = ∞	160			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 μA, I _C = 0	5			
Collector-Base cut-off current	I _{CB0}	V _{CB} = 120 V, I _E = 0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 4V, I _C = 0			0.1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =30mA, I _B =3mA			0.7	V
Base - emitter saturation voltage	V _{BE(sat)}	I _c = 30mA, I _B = 3mA			1.2	
Base - emitter voltage	V _{BE}	V _{CE} = 5V, I _C = 10mA			1.5	
DC current gain	h _{FE}	V _{CE} = 5V, I _C = 10mA	60		270	
Turn-ON Time	t _{on}	See specified Test Circuit		0.18		us
Storage Time	t _{stg}			1		
Fall Time	t _f			0.2		
Collector output capacitance	C _{ob}	V _{CB} = 10V, f=10MHz		2	2.8	pF
Transition frequency	f _T	V _{CE} = 10V, I _C = 10mA		150		MHz

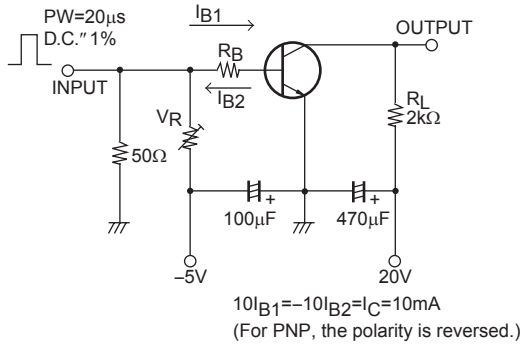
■ Classification of h_{FE}

Type	2SC3141-K3-HF	2SC3141-K4-HF	2SC3141-K5-HF
Range	60-120	90-180	135-270
Marking	K3 _F	K4 _F	K5 _F

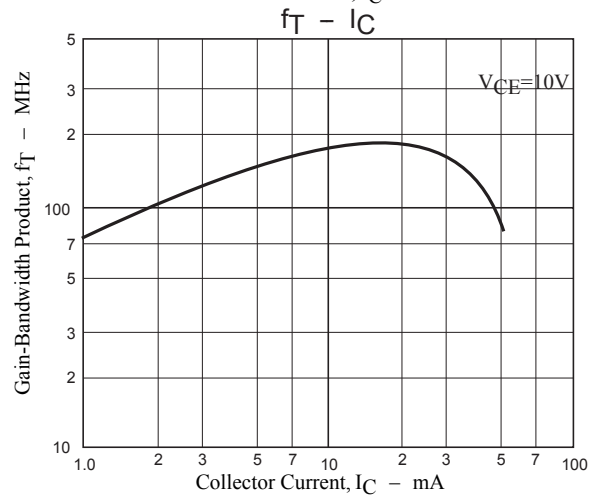
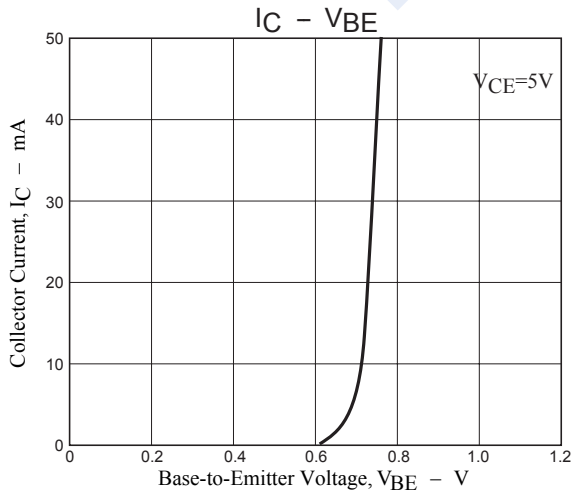
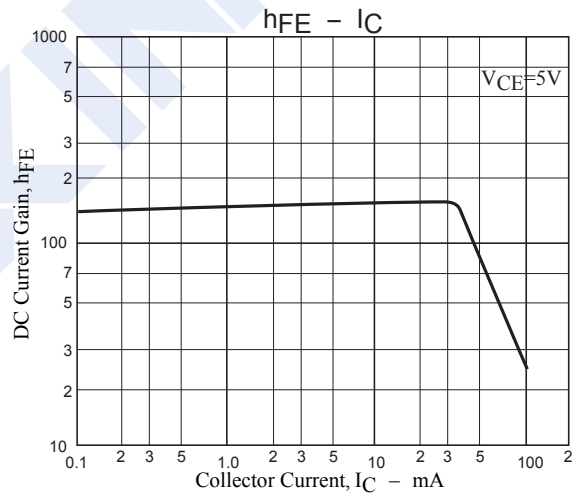
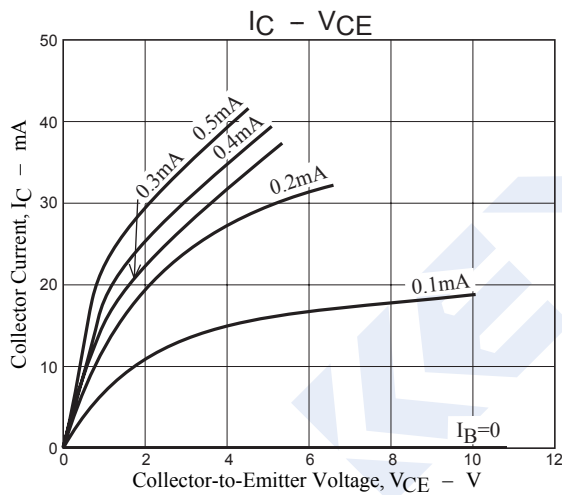
NPN Transistors

2SC3143-HF

Switching Time Test Circuit



Typical Characteristics



NPN Transistors

2SC3143-HF

■ Typical Characteristics

