

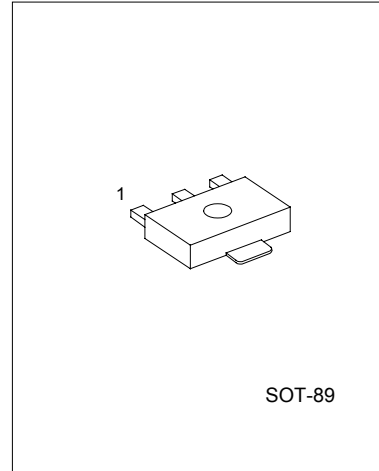
NPN EPITAXIAL PLANAR SILICON TRANSISTOR

FEATURE

*Low collector-to-emitter saturation voltage:
 $V_{CE(sat)}=0.4V$ max/ $I_C=3A$, $I_B=0.3A$

APPLICATIONS

*Suitable for relay drivers, high-speed inverter, converters, and other general large-current switching.



SOT-89

1:EMITTER 2:COLLECTOR 3:BASE

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Collector to Base Voltage	V _{CB0}	60	V
Collector to Emitter Voltage	V _{CEO}	50	V
Emitter to Base Voltage	V _{EBO}	6	V
Collector Current	I _C	5	A
Collector Current (Pulse)	I _{CP}	9	A
Collector Dissipation	P _C	1	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Collector Cut-Off Current	I _{CB0}	V _{CB} =40V, I _E =0			0.1	mA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =4V, I _C =0			0.1	mA
DC Current Gain	h _{FE1}	V _{CE} =2V, I _C =1A	70		360	
	h _{FE2}	V _{CE} =2V, I _C =3A	30			
Gain bandwidth product	f _T	V _{CE} =5V, I _C =1A		30		MHZ
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		100		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =3A, I _B =0.3A			0.4	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =1mA, I _E =0	60			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, R _{BE} =∞	50			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _C =0, I _E =1mA	6			V
Turn-ON Time	t _{ON}	See specified test circuit		0.1		μs
Storage Time	t _{stg}	See specified test circuit		1.4		μs
Fall Time	t _f	See specified test circuit		0.2		μs

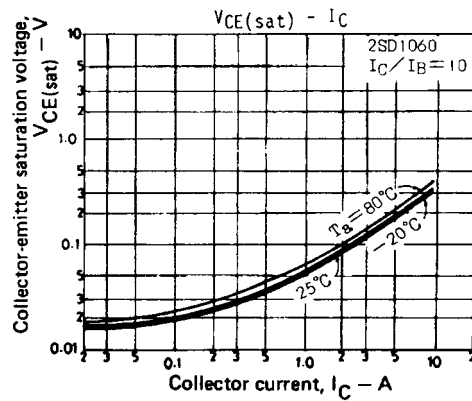
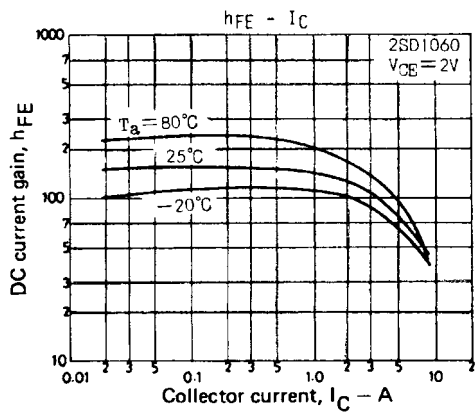
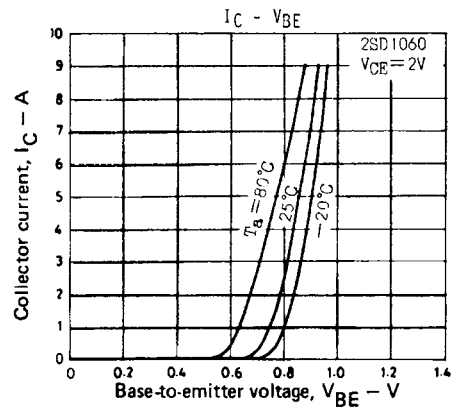
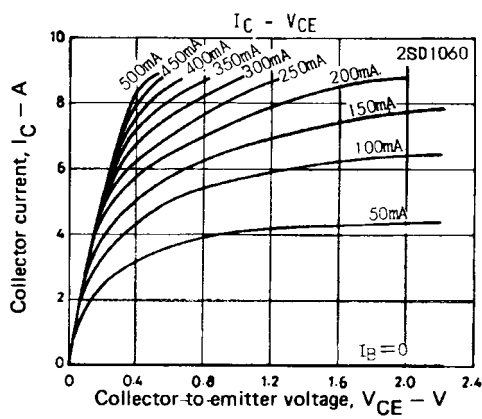
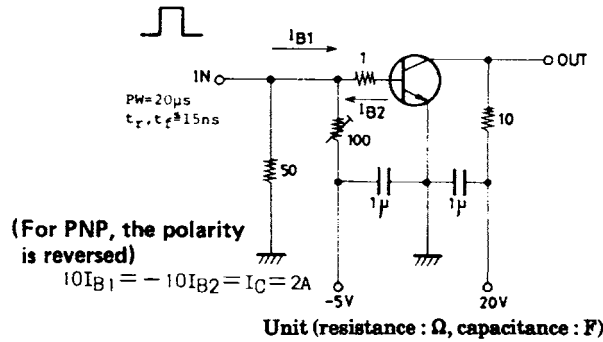
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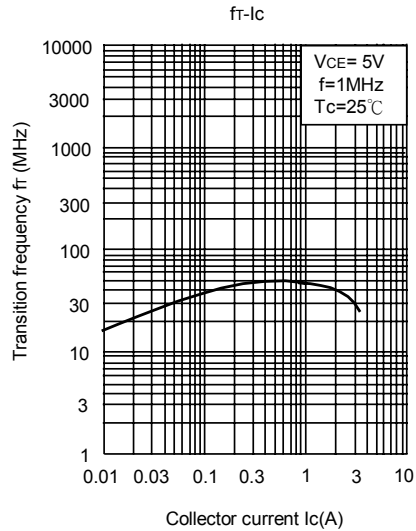
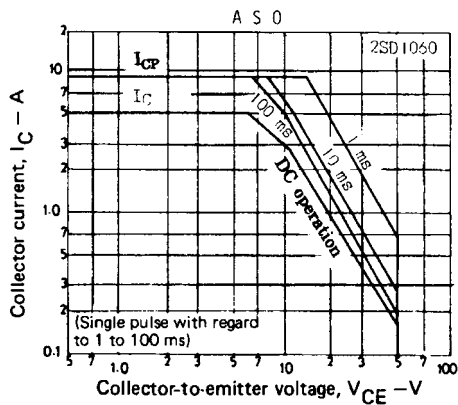
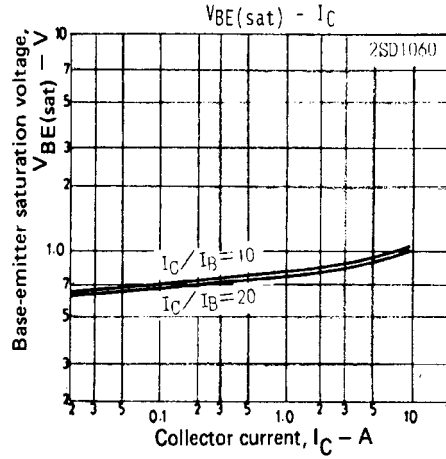
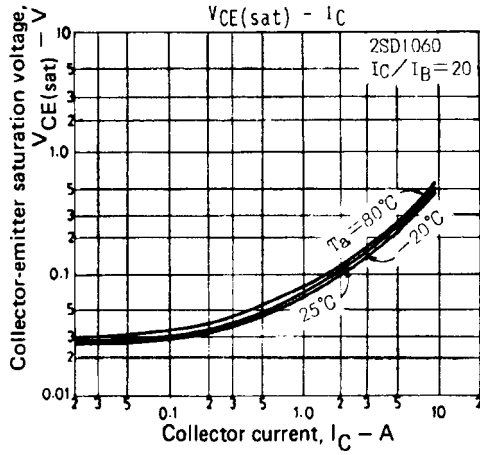
NPNEPITAXIAL PLANAR TRANSISTOR

CLASSIFICATION of hFE1

RANK	Q	R	S
RANGE	70-140	100-200	180-360

SWITCHING TIME TEST CIRCUIT





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