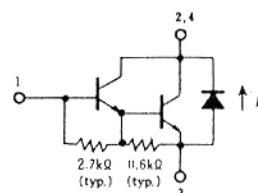
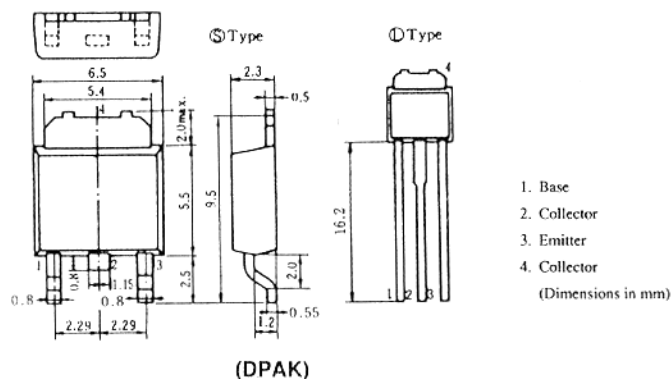


2SD1520(L), 2SD1520(S)

SILICON NPN EPITAXIAL
MEDIUM SPEED POWER AMPLIFIER

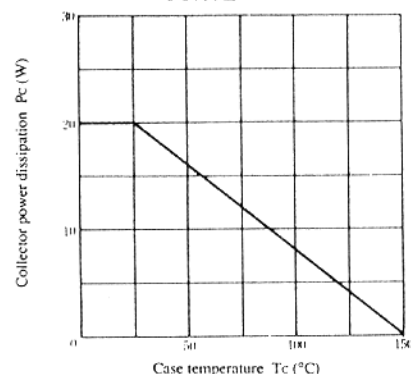


■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD1520(L), 2SD1520(S)	Unit
Collector to base voltage	VCBO	100	V
Collector to emitter voltage	VCEO	80	V
Emitter to base voltage	VEBO	7	V
Collector current	IC	4	A
Collector peak current	iC(peak)	8	A
Collector power dissipation	PC*	20	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C
C to E diode forward current	ID*	4	A

* Value at Tc = 25°C

MAXIMUM COLLECTOR DISSIPATION CURVE

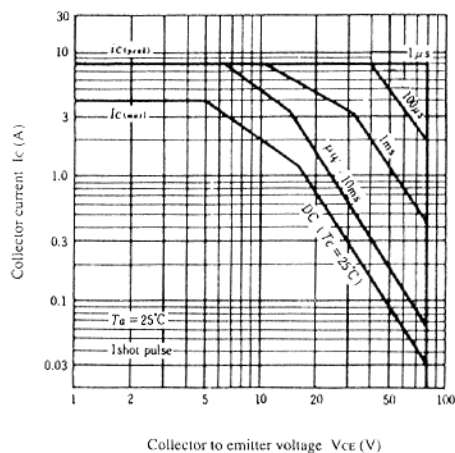


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

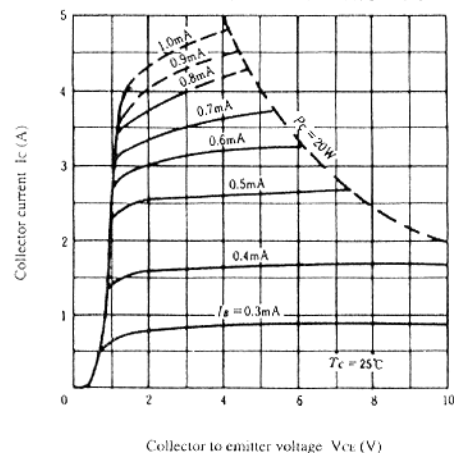
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter breakdown voltage	V(BR)CEO	IC = 25mA, RBE = ∞	80	—	—	V
Emitter to base breakdown voltage	V(BR)EBO	IE = 50mA, IC = 0	7	—	—	V
Collector cutoff current	ICBO	VCB = 80V, IE = 0	—	—	100	μA
	ICEO	VCE = 60V, RBE = ∞	—	—	10	μA
DC current transfer ratio	hFE	VCE = 3V, IC = 2A*	1000	—	20000	
Collector to emitter saturation voltage	VCE(sat)1	IC = 2A, IB = 4mA*	—	—	1.5	V
	VCE(sat)2	IC = 4A, IB = 40mA*	—	—	3.0	V
Base to emitter saturation voltage	VBE(sat)1	IC = 2A, IB = 4mA*	—	—	2.0	V
	VBE(sat)2	IC = 4A, IB = 40mA*	—	—	3.5	V
C to E diode forward voltage	VD	ID = 4A	—	—	3.0	V
Turn on time	ton	IC = 2A, IB1 = -IB2 = 4mA	—	0.5	—	μs
Storage time	tstg		—	4.5	—	μs
Fall time	tr		—	1.0	—	μs

* Pulse Test.

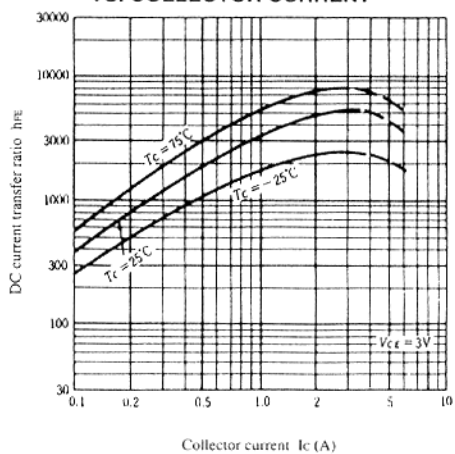
AREA OF SAFE OPERATION



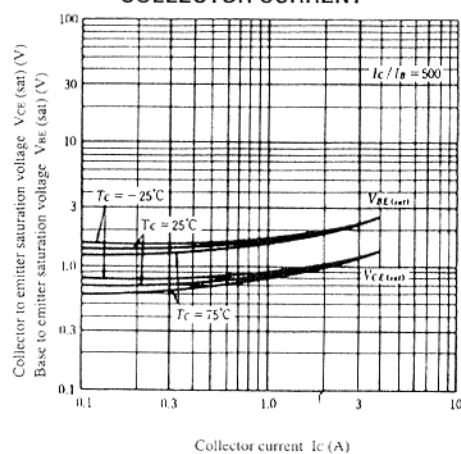
TYPICAL OUTPUT CHARACTERISTICS



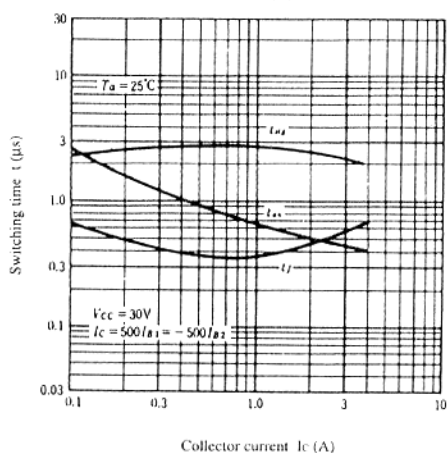
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT



TRANSIENT THERMAL RESISTANCE

