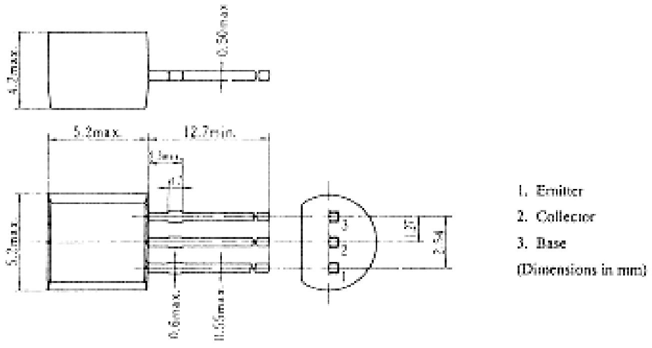
HITACHI

2SC1515Ⓚ

SILICON NPN TRIPLE DIFFUSED

HIGH VOLTAGE SWITCHING

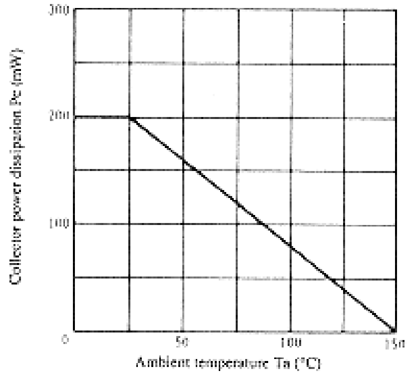


(JEDEC TO-92)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC1515Ⓚ	Unit
Collector to base voltage	V_{CBO}	200	V
Collector to emitter voltage	V_{CES}	200	V
Collector to emitter voltage	V_{CEO}	150	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE

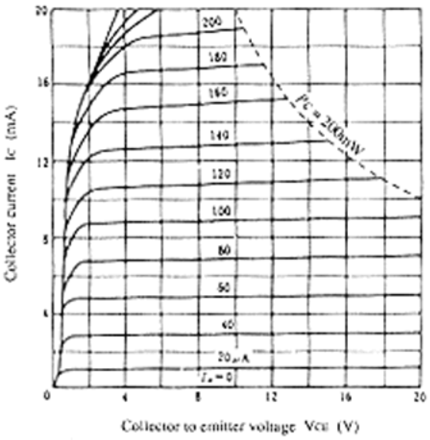


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

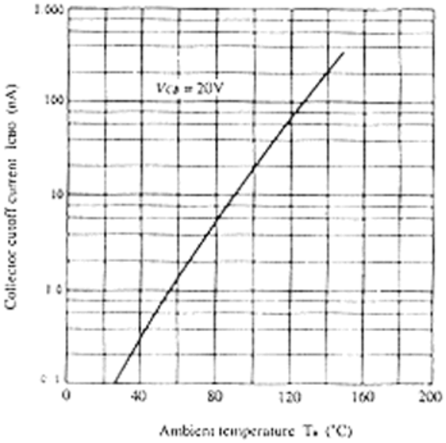
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter breakdown voltage	$V_{(BR)CES}$	$I_C = 10\mu A$, $R_{BE} = 0$	200	—	—	V
	$V_{(BR)CEO}$	$I_C = 1mA$, $R_{BE} = \infty$	150	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu A$, $I_C = 0$	5	—	—	V
Collector cutoff current	I_{CBO}	$V_{CB} = 20V$, $I_E = 0$	—	—	0.1	μA
DC current transfer ratio	h_{FE}	$V_{CE} = 6V$, $I_C = 10mA$	30	—	300	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10mA$, $I_B = 1mA$	—	—	1.0	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10mA$, $I_B = 1mA$	—	—	1.5	V
Gain bandwidth product	f_T	$V_{CE} = 6V$, $I_C = 10mA$	60	—	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 6V$, $I_E = 0$, $f = 1MHz$	—	—	10	pF

2SC1515(K)

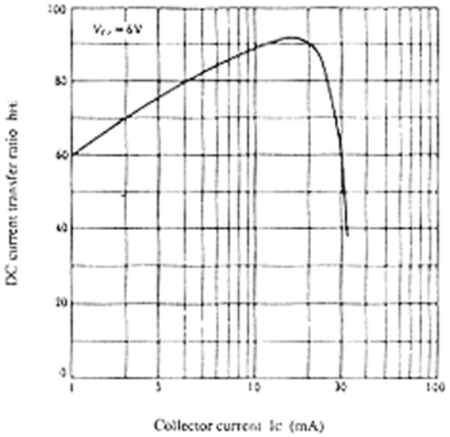
TYPICAL OUTPUT CHARACTERISTICS



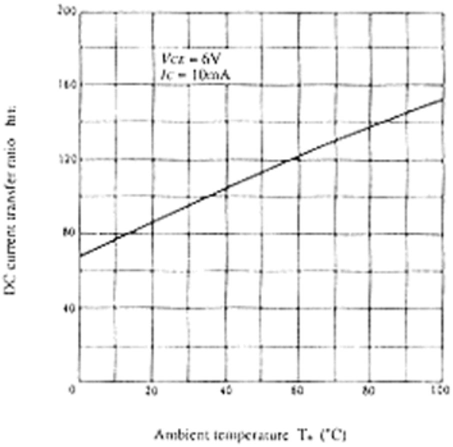
COLLECTOR CUTOFF CURRENT VS. AMBIENT TEMPERATURE



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



DC CURRENT TRANSFER RATIO VS. AMBIENT TEMPERATURE



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT