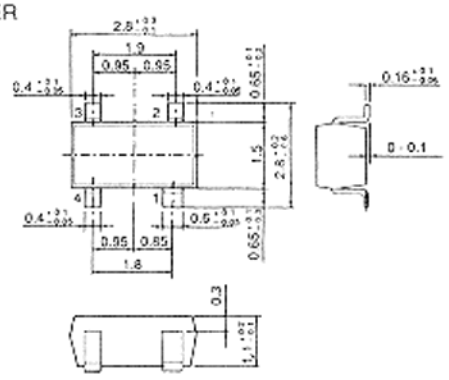
HITACHI

2SD1777

SILICON NPN WITH INTERNAL RESISTANCE

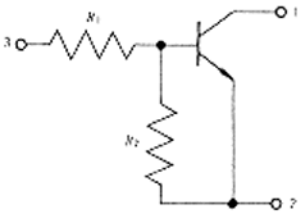
LOW FREQUENCY AMPLIFIER, MUTING
SWITCHING, INVERTER



(MPAK-4)

1. Output (Collector)
2. Ground (Emitter)
3. Input (Base)
4. NC (No contact)

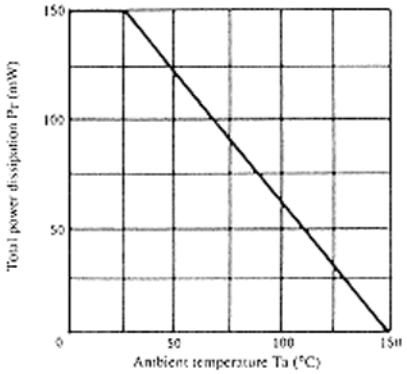
(Dimensions in mm)



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD1777	Unit
Supply voltage	V_{CC}	20	V
Input voltage	V_I	±10	V
Output current	I_O	600	mA
Total power dissipation	P_T	150	mW
Operating temperature	T_{OP}	−25 to +110	°C
Storage temperature	T_{stg}	−55 to +150	°C

MAXIMUM TOTAL POWER DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Input on voltage	$V_{I(on)}$	V_{CC} = 0.2V, I_O = 10mA	1.1	—	1.7	V
Input off voltage	$V_{I(off)}$	V_{CC} = 5V, I_O = 10μA	0.5	—	1.2	V
Output saturation voltage	$V_{O(on)}$	I_O = 10mA, I_I = 0.5mA	—	20	40	mV
Output cutoff current	$I_{O(off)}$	V_{CC} = 5V, V_I = 0	—	—	0.5	μA
DC current transfer ratio	G_i	V_{CC} = 5V, I_O = 10mA	60	100	—	
Input resistance	R_1		—	6.8	—	kΩ
Resistance ratio	R_1/R_2		0.9	1.0	1.1	
Turn on time	t_{on}	V_{CC} = 5V, V_I = 5V R_L = 1kΩ	—	0.3	—	μs
Storage time	t_{stg}		—	1.5	—	μs
Fall time	t_f		—	0.7	—	μs
Output on resistance	r_{on}	V_I = 7V, R_L = 1kΩ, f = 1kHz	—	1.0	—	Ω

* Marking is [CL].

■ See characteristic curves of 2SD1676.