

**ULTRA LOW<sub>r<sub>ec</sub></sub> (sat)**  
**SILICON EPITAXIAL JUNCTION**  
**PNP/NPN SWITCHING TRANSISTORS**

2N3677  
 2N5066

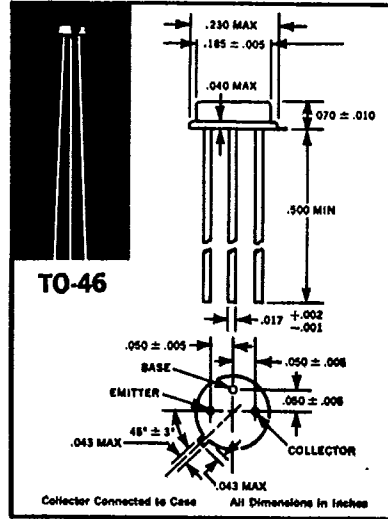
GEOMETRY 292, (2N3677)  
 GEOMETRY 485, (2N5066)

T-37-23  
 T-35-23

- COMPLEMENTARY TYPES 2N3677 (PNP) 2N5066 (NPN)
- $r_{ec}$  (sat) 4 Ohms TYPICAL
- LOW  $C_{ob}$
- LOW LEAKAGE
- HIGH  $BV_{EBO}$

**ELECTRICAL DATA ABSOLUTE MAXIMUM RATINGS**

PARAMETER	SYMBOL	2N3677/2N5066	UNITS
Collector to Emitter Voltage	$BV_{CES}$	20	Volts
Emitter to Collector Voltage	$BV_{ECS}$	20	Volts
Collector to Base Voltage	$BV_{CBO}$	30	Volts
Emitter to Base Voltage	$BV_{EBO}$	30	Volts
Collector Current	$I_C$	100	mA
Power Dissipation	$P_C$	400	mW
Derating Factor	$D_F$	2.3	mW/°C
Junction Temperature (operating and storage)	$T_J$	-65°C to +200°C	
Lead Temperature (1/16" ± 1/32" from case)	$T_L$	240°C for 10 sec.	



**ELECTRICAL CHARACTERISTICS: TA = 25°C (UNLESS OTHERWISE STATED)**

PARAMETER	SYMBOL	CONDITION	2N3677/2N5066			UNITS
			Min.	Typ.	Max.	
Collector To Base Leakage	$I_{CBO}$	$V_{CB} = V_{CB}MAX.$	—	0.5	1.0	nA
Emitter to Base Leakage	$I_{EBO}$	$V_{EB} = V_{EB}MAX.$	—	0.5	1.0	nA
Collector To Base Leakage	$I_{CBO}$	$V_{CB} = V_{CB}MAX.$ (TEMP = 100°C)	—	30	100	nA
Emitter To Base Leakage	$I_{EBO}$	$V_{EB} = V_{EB}MAX.$ (TEMP = 100°C)	—	30	100	nA
Offset Voltage	$V_O$	$I_B = 1mA$ $I_E = 0$	—	0.7	1.0	mV
DC Common Collector Forward Current Transfer Ratio	$h_{FC}$	$V_{EC} = 6V$ $I_E = 1mA$	4	8	—	—
High Frequency Current Gain	$h_{fe}$	$V_{CE} = 6V, I_C = 1mA$ $f = 1MC$	5	10	—	—
Inverted Dynamic Saturation Resistance	$r_{ec}(sat)$	$I_o = 0.1mA$ $I_o = 1.0mA$ $f = 1kHz$	—	4	8	Ohms
Collector To Base Capacitance	$C_{ob}$	$V_{CB} = 6V, I_E = 0, f = 159kHz$	—	6	10	pfd
Emitter To Base Capacitance	$C_{eb}$	$V_{EB} = 6V, I_C = 0, f = 159kHz$	—	5	6	pfd



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