TEST SPECIFICATIONS

SCIENTIFIC TEST, INC. TEST SPECIFICATIONS 5000C/5300C

	TEST		SPECIFICATION		
	PARAMETER	V RANGE	I RANGE	MAX RES.	ACCURACY
LEAKAGE	I_R, I_{CBO}, $I_{CEO/R/S/X}$, $I_{DSS/X}$, I_{DOFF}, I_{DRM}, I_{RRM}	.10V to 999V (2000V)[1]	2NA (20PA)[2] to 50MA	1 NA (1PA)[2]	1% + 2NA + 20PA/V[8] (1% + 200PA + 2PA/V)[2,8]
	I_{EBO}, I_{GSSF}, I_{GSSR}, I_{GSS}, I_{GKO}, I_R (OPTO)	.10V to 20V (80V)[3]	2NA (20PA)[2] to 3A	1 NA (1PA)[2]	1% + 2NA + 20PA/V[8] (1% + 200PA + 2PA/V)[2,8]
BREAKDOWN	BV_{CEO}, BV_{CES} (IGBT) (300µS Pulse above 10mA)	.10V to to 450V (900V)[1] to 700V (1400V)[1] to 800V (1600V)[1]	100µA to 200MA to 100MA to 50MA	1 MV	1% + 100MV
	BV_{DSS}, V_D, BV_{CBO}, V_{DRM}, V_{RRM}, V_{BB}, BV_R	.10V to 999V (2000V)[1]	100NA to 50MA	1 MV	1% + 100MV
	BV_Z	.10V to 5.00V to 9.999V to 50.00V to 700V (1400V)[1] to 999V (2000V)[1] BV_Z Soak - 50V (100V) 0-50 ms to 99 secs	10µA to 49.9A (500A)$_4$ to 25A (250A)$_4$ to 9.99A to 100 MA to 50MA to 400mA to 80mA	1 MV	0.4% + 2 LSB
	BV_{EBO}, BV_{GSS}, BV_{GKO}	.10V to 20V (80V)[3]	100NA to 3A	1 MV	1% + 10MV
VCESUS	V_{CEOSUS}, V_{CERSUS}, V_{CEVSUS}	V_{CE}: TO 1500V Inductive Kickback, 35mH choke	I_C: to 4A	0.5V	2% + 0.5V
IMPEDANCE	ZZ (1 kHZ) 0.1Ω to 20 KΩ	0.1V to 200V DC (measure 50µV to 300mV rms)	100µA to 300mA DC	0.001 Ω 1µV	1% + 1% Range
GAIN	h_{FE} (1 to 99,999) CTR (.01 to 99,999)	V_{CE}: .10V to 5.00V[5] to 9.99V to 49.9V	I_E: 10µA to 49.9A (99.9A)[9] (500A)[4] derate to 25A (50A)[9] (250)[4] derate to 9.99A I_F, I_B: 100NA to 10A	.01 h_{FE} .0001 CTR	V_{CE}: 1% + 10MV I_C: 1% + 100NA I_F, I_B: 1% +5NA

1. 2000V Hi Voltage (Anode/Collector) Option
2. Lo Current Deck Option — Also adds programmable soak time from 1 mS to 99 secs. for current under 1µA. (Not available on 5000E)
3. 80V Lo Source (Gate/Base) Option
4. 500 Amp Hi Current Deck Option. (Not available on 5000E)
5. Voltage @ front panel terminals; allow for drop in cables
6. Optional 100V Hi Source
7. 40A Lo Soure Option
8. Hi Deck or Adaptor: 1% + 2NA + 40PA/V
9. 100A Option

	TEST		SPECIFICATION		
	PARAMETER	V RANGE	I RANGE	MAX RES.	ACCURACY
ON STATE	V_{CESAT}, V_{BESAT}, V_{BEON} V_F, V_T V_{DSON}, I_{DON}, V_{GSON} V_{GEON} V_F (Opto-Diode)	V_{CE}, V_D, V_F, V_T: .10V to 5.00V to 9.99V V_{GS}, V_{GE}, V_{BE}, V_F: .10V to 9.99V	I_E, V_T, I_F, I_D: 10µA to 49.9A (99.9A)[9] (500A)[4] derate to 25A (50A)[9] (250A)[4] I_B, I_F, I_{GT}: 100NA to 10A (40A)[7]	1MV	V: 1% + 10MV I_E, I_F, I_D, I_T: 1% + 100NA I_B, I_{GT}: 1% + 5NA
	V_{GSTH}, V_{GETH}	.10V to 49.9V	I_D: 100µA to 3A	1MV	1% + 10MV
	V_O (Regulator)	V_O: .10V to 20V (50V)[3] V_{IN}: .10V to 49.9V Load: Resistive or Electronic	I_O: 1MA to 5A	1MV	1% + 10MV
	I_{IN} (Regulator)	V_{IN}: .10V to 20V (80V)[3] Load: R_{GK}, 1K, 10K, EXT, OPEN, SHORT	I_{IN}: 1MA to 3A	10NA	1% + 5NA
	V_C	.10V to 49.9V	10MA to 10A	1MV	1% + 10MV
OFF	V_{GSOFF}	V_O: .10V to 20V (80V)[3]	I_D: 100NA (20PA)[2] to 3A V_{DS}: .10V to 50V	1MV	1% + 10MV
TRIGGER	I_{GT} V_{GT} V_{OPER} (Relay)	V_D: 5V to 49.9V V_{GT}: .10V to 20V (80V)3 .10V to 50V	I_{AK}: to 3A I_{GT}: 100NA to 3A R_L: 12, 30, 100Ω, EXT	10NA 1MV .10V	1% + 5NA 1% + 10MV 1% + .10V
HOLD	I_H $V_{RELEASE}$ (Relay)	V_D: 5V to 49.9V .10V to 50V	I_H: 1.5A I_{GT}: 100NA to 3A R_L: 12, 30, 100Ω, EXT (Initial I_{AK} set by R_L)	1µA .10V	1% + 2µA 1% + .10V
LATCH	I_L (Tested indirectly, no exact value)	V_D: 5V to 49.9V	I_L: 100µA to 3A I_{GT}: 100NA to 3A R_L: 12, 30, 100Ω, EXT	N/A	N/A
BREAKOVER	V_{BO}, I_{BO} (SSOVP) V_{BO}, I_{BO} (STS, DIAC) V_{BO}, I_{BO} (SIDAC) V_S, I_S (SBS, STS)	0.10 to 400V[1] 0.10 to 20V (80V)[3] 0.10 to 400V[1] 0.10 to 20V (80V)[3]	10mA to 900mA 1µA to 200µA 1µA to 1mA 1µA to 200µA	1mV	1% + 100mV 1% + 10mV 1% + 100mV

Accuracy specifications are in addition to ± 1 digit in readout.