

TITLE: .070 MULTI W/W CONNECTOR

B	REVISED	J. S. KANG	1995. 03. 02
A	NEW RELEASED	J. S. KANG	1995. 01. 23
REV	REVISION RECORD	BY	DATE
PRODUCT SPECIFICATION : .070 MULTI W/W CONNECTOR		SHEET NO. : 1 OF 6	REV. : B
WRITTEN BY : J. S. KANG	CHECKED BY : <i>[Signature]</i>	APPROVED BY : <i>[Signature]</i>	DATE : 1995. 01. 23

THIS PRODUCT SPECIFICATION CONTAINS INFORMATION PROPRIETARY TO MOLEX AND SHOULD NOT BE USED WITHOUT PRIOR WRITTEN PERMISSION.

[1 SCOPE]

THIS PRODUCT SPECIFICATION COVERS THE GENERAL REQUIREMENTS FOR THE .070 MULTI W/W CONNECTOR SERIES.

[2 PRODUCT DESCRIPTION]

[2.1 PRODUCT NAME AND PART NUMBER]

PRODUCT NAME	PART NO.	REMARK
.070 MULTI W/W MALE HSG-4P	35180-040*	*: COLOR 0 (NATURAL) 2 (RED) 3 (YELLOW) 4 (BLUE)
.070 MULTI W/W MALE HSG-6P	35180-060*	
.070 MULTI W/W FEMALE HSG-2P (A TYPE)	35181-020*	
.070 MULTI W/W FEMALE HSG-2P (B TYPE)	35181-021*	
.070 MULTI W/W FEMALE HSG-2P (C TYPE)	35181-022*	
.070 MULTI W/W FEMALE HSG T. P. A-1P	35182-019*	
.070 MULTI W/W MALE HSG T. P. A-2P	35182-029*	
.070 MULTI W/W MALE HSG T. P. A-3P	35182-039*	
.070 MALE TERMINAL - A TYPE	35745-0*10	*: BARREL SIZE 1: SMALL 2: MEDIUM
.070 MALE TERMINAL - B TYPE	35747-0*10	
.070 FEMALE TERMINAL - A TYPE	35746-0*10	
.070 FEMALE TERMINAL - B TYPE	35748-0*10	

[2.2 MATERIALS, PLATINGS & DIMENSIONS]

SEE THE APPROPRIATE DRAWINGS FOR INFORMATION ON MATERIALS, PLATINGS AND DIMENSIONS.

[3 RATINGS]

VOLTAGE	300V AC(RMS)/DC		
	AWG	CURRENT	INSULATION DIA
CURRENT	# 14	15 A	Ø3.8 MAX.
	# 16	10 A	Ø3.4 MAX.
	# 18	7 A	Ø3.0 MAX.
	# 20	5 A	Ø2.7 MAX.
	# 22	4 A	Ø2.5 MAX.
AMBIENT TEMPERATURE RANGE : -40°C --- +120°C			

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[4 APPLICABLE PRODUCT]

PART NUMBER & NAME	APPLICABLE TERMINAL			TERMINAL WIRE SIZE
	MALE TM'L	FEMALE TM'L	APPLICABLE NUMBER OF CIRCUIT	
35180-040* (MALE HSG-4P)	35745-0*10	----	1	* : 1 (AWG #22 - #20) 2 (AWG #18 - #14)
	----	35746-0*10	3	
	35747-0*10	----	2	
	----	35748-0*10	4	
35180-060* (MALE HSG-6P)	35745-0*10	----	3 , 4	
	----	35746-0*10	2 , 5	
	35747-0*10	----	1 , 6	
35181-020* (A TYPE)	----	35746-0*10	1 , 2	
35181-021* (B TYPE)	35745-0*10	----	1 , 2	
35181-022* (C TYPE)	----	35748-0*10	1 , 2	

* T. P. A

PART NUMBER	APPLICABLE HOUSING	QUANTITY
35182-019*	35181-020*	2 EA
	35181-021*	2 EA
	35181-022*	2 EA
35182-029*	35180-040*	2 EA
35182-039*	35180-060*	2 EA

* MATING CIRCUIT No.

		35180-040* (MALE HSG-4P)	35180-060* (MALE HSG-6P)
35181-020* (A TYPE)	1 CKT	2 CKT	4 CKT
	2 CKT	1 CKT	3 CKT
35181-021* (B TYPE)	1 CKT	3 CKT	5 CKT
	2 CKT	4 CKT	2 CKT
35181-022* (C TYPE)	1 CKT	-----	6 CKT
	2 CKT	-----	1 CKT

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[5 ELECTRICAL PERFORMANCE]

ITEM		CONDITION	REQUIREMENT
5-1	INSULATION RESISTANCE	MATE CONNECTORS WITH A VOLTAGE OF 500 VDC BETWEEN ADJACENT TERMINALS AND BETWEEN TERMINALS AND GROUND.	100 MΩ MIN.
5-2	DIELECTRIC RESISTANCE	MATE CONNECTORS WITH A VOLTAGE OF 1500 VAC FOR ONE MINUTE BETWEEN ADJACENT TERMINALS AND BETWEEN TERMINALS AND GROUND.	NO BREAKDOWN
5-3	CONTACT RESISTANCE (LOW LEVEL)	MATE CONNECTORS WITH A MAXIMUM VOLTAGE OF 20mV AND A CURRENT OF 10mA.	10 mΩ MAX.

[6 MECHANICAL PERFORMANCE]

ITEM		CONDITION	REQUIREMENT	
6-1	CONNECTOR INSERTION & WITHDRAWAL	INSERT AND WITHDRAW CONNECTORS AT A RATE OF 25±6mm PER MINUTE.	INSERTION FORCE (MAX.)	WITHDRAWAL FORCE (MIN.)
			3.5Kg. f	0.8Kg. f
6-2	TERMINAL RETENTION FORCE	AXIAL PULLOUT FORCE ON THE TERMINAL IN THE HOUSING AT A RATE OF 25±6mm PER MINUTE.	4.0 Kg. f MIN.	
6-3	DURABILITY	MATE CONNECTORS UP TO 30 CYCLES AT A MAXIMUM RATE OF 10 CYCLES PER MINUTE.	CONTACT RESISTANCE : 20mΩ MAX. (CHANGE FROM INITIAL)	
6-4	TERMINAL INSERTION FORCE	INSERT THE CRIMPED TERMINAL INTO THE HOUSING	3.0 Kg. f MAX.	

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ITEM		CONDITION	REQUIREMENT	
6-5	VIBRATION	AMPLITUDE : 1.5mm PEAK TO PEAK SWEEP TIME : 10-55-10 HERTZ IN ONE MINUTE DURATION : 2 HOURS IN EACH X-Y-Z AXIS.	APPEARANCE : NO DAMAGE CONTACT RESISTANCE : 20mΩ MAX. (CHANGE FROM INITIAL) DISCONTINUITY : 1μ Sec. MAX.	
6-6	MECHANICAL SHOCK	50G's WITH THREE SHOCKS IN EACH X-Y-Z AXIS.	APPEARANCE : NO DAMAGE CONTACT RESISTANCE : 20mΩ MAX. (CHANGE FROM INITIAL) DISCONTINUITY : 1μ Sec. MAX.	
6-7	WIRE PULLOUT FORCE	APPLY AN AXIAL PULLOUT FORCE ON A WIRE AT A RATE OF 25±6mm PER MINUTE.	AWG	PULLOUT FORCE
			#14	15 Kg. f MIN.
			#16	13 Kg. f MIN.
			#18	10 Kg. f MIN.
			#20	6 Kg. f MIN.
			#22	4 Kg. f MIN.

[7 ENVIRONMENTAL PERFORMANCE]

ITEM		CONDITION		REQUIREMENT
7-1	THERMAL SHOCK	MATE CONNECTORS EXPOSED FOR 5 CYCLES OF :		APPEARANCE : NO DAMAGE CONTACT RESISTANCE : 20 mΩ MAX. (CHANGE FROM INITIAL)
		TEMPERATURE	DURATION	
		-55 +0/-3°C	30 MINUTES	
		+25 ±10°C	5 MINUTES MAX.	
		+120 +3/-0°C	30 MINUTES	
		+25 ±10°C	5 MINUTES MAX.	
7-2	HEAT RESISTANCE	MATE CONNECTORS EXPOSED FOR 96HOURS AT 120±2°C.		APPEARANCE : NO DAMAGE CONTACT RESISTANCE : 20 mΩ MAX. (CHANGE FROM INITIAL)

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ITEM		CONDITION	REQUIREMENT
7-3	HUMIDITY STEADY STATE	MATE CONNECTORS AND EXPOSED TO A TEMPERATURE OF 80±2°C WITH A RELATIVE HUMIDITY OF 90 TO 95% FOR 96 HOURS.	APPEARANCE : NO DAMAGE CONTACT RESISTANCE : 20mΩ MAX. (CHANGE FROM INITIAL) DIELECTRIC STRENGTH : NO BREAKDOWN INSULATION RESISTANCE: 100 MΩ MIN.
7-4	TEMPERATURE RISE	MATE CONNECTORS AND MEASURE THE CONTACT TEMPERATURE AT THE RATED CURRENT LOAD.	MAXIMUM TEMPERATURE OF THE TERMINAL OVER AMBIENT OF 30°C.
7-5	SALT SPRAY	PUT THE CONNECTORS INTO THE CHAMBER AT 35±2°C AND SPRAY 5% SOLUTION OF NaCl FOR 48 HOURS.	APPEARANCE : NO DAMAGE CONTACT RESISTANCE : 20mΩ MAX. (CHANGE FROM INITIAL)
7-6	SO ₂ GAS	24 HOURS EXPOSURE TO 50 PPM SO ₂ GAS AT 40°C.	APPEARANCE : NO DAMAGE CONTACT RESISTANCE : 20mΩ MAX. (CHANGE FROM INITIAL)
7-7	NH ₃ GAS	40 MINUTES EXPOSURE TO NH ₃ GAS EVAPORATING FROM 28% AMMONIA SOLUTION.	APPEARANCE : NO DAMAGE CONTACT RESISTANCE : 20mΩ MAX. (CHANGE FROM INITIAL)

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